Permit info

NCL
Lyi/scan — file: Cleveland Fire Hall #6 2017 (Bradley)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, TN 37243
Toll Free Number: 1-888-891-TDEC (8332)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: City of Cleveland Fire Hall #6		**Existing NPDES Tracking Number: TNR**	
Street Address or Location: 2190 Westland Dr, Cleveland, TN 37311		Start date:	05/29/17
		Estimated end date:	05/28/18
Site Activity Description: municipal fire hall construction		Latitude (dd.dddd):	35.13885
		Longitude (-dd.dddd):	-84.90654
County(ies): Bradley	MS4 Jurisdiction: City of Cleveland	Acres Disturbed:	1.72
		Total Acres:	1.62

Does a topographic map show dotted or solid blue lines ☒ and/or wetlands ☐ on or adjacent to the construction site?
If wetlands are located on-site and may be impacted, attach wetlands delineation report.
If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number? ARAP permit No.: N/A

Receiving waters: unnamed tributary to South Mouse Creek

Attach the SWPPP with the NOI: ☒ SWPPP Attached | Attach a site location map: ☒ Map Attached

Site Owner/Developer Entity (*Primary Permittee*): (person, company, or legal entity that has operational or design control over construction plans and specifications): City Of Cleveland

Site Owner/Developer Signatory (V.P. level/higher - signs certification below): (individual responsible for site): Melinda B. Carroll, Assistant City Mgr		Signatory's Title or Position (V.P. level/higher - signs certification below): Melinda B. Carroll, Assistant City Manager		
Mailing Address: City of Cleveland, 160 Second St. N.E.		City: Cleveland	State: TN	Zip: 37311
Phone: (423-339-0260	Fax: (423-559-3395	E-mail: mcarroll@clevelandtn.gov		

Optional Contact: Jonathan Jobe,		Title or Position: Development & Engineering Services Director		
Mailing Address: P.O. Box 1519		City: Cleveland	State: TN	Zip: 37364
Phone: 423-479-1913	Fax: 423-	E-mail: jjobe@clevelandtn.gov		

Owner or Developer Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Owner or Developer Name (print or type): City of Cleveland Melinda B. Carroll | Signature: City of Cleveland Melinda B. Carroll | Date: 4-18-17

Contractor(s) Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)

I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated.

Contractor company name (print or type):				
Contractor signatory (print/type) (V.P. level or higher):		Signature:		Date:
Mailing Address:		City:	State:	Zip:
Phone: ( )	Fax: ( )	E-mail:		

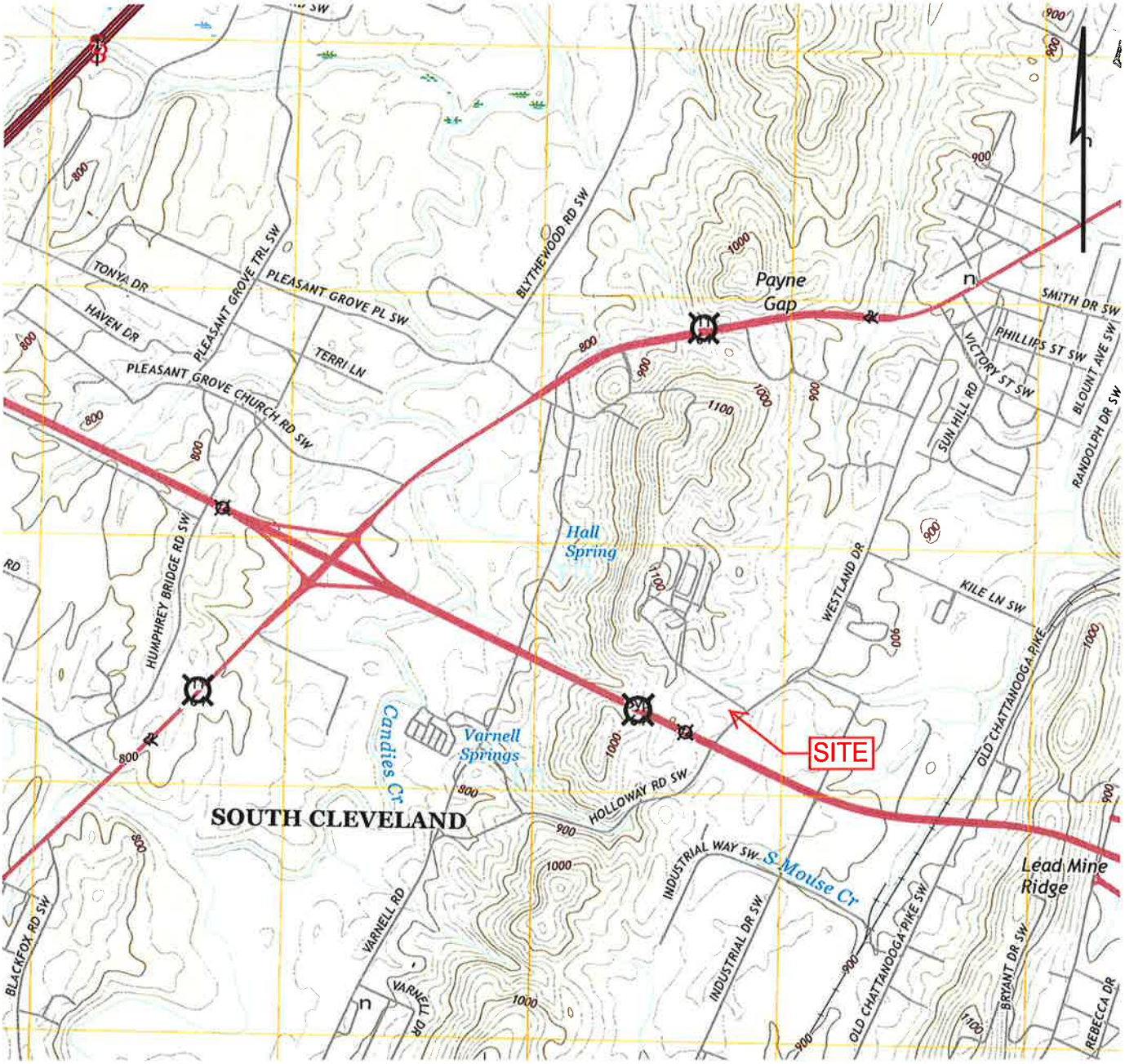
Other Contractor company name (print or type):				
Other Contractor signatory (print/type) (V.P. level or higher):		Signature:		Date:
Mailing Address:		City:	State:	Zip:
Phone: ( )	Fax: ( )	E-mail:		

RECEIVED
APR 20 '17
ENVIRONMENT & CONSERVATION
CHATTANOOGA FIELD OFFICE

OFFICIAL STATE USE ONLY

Received Date:	Reviewer:	Field Office:	Permit Number TNR: 113020	Exceptional TN Water:
Fee(s):	T & E Aquatic Flora and Fauna:		Impaired Receiving Stream:	Notice of Coverage Date:

(Continued on reverse)



LOCATION MAP FROM USGS TOPO DATA

Quad Sheet South Cleveland, TN 2016

1:24 000

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

ENVIRONMENTAL FIELD OFFICE

1301 Riverfront Parkway, Suite 206

Chattanooga, TN 37402

(423)634-5745 STATEWIDE 1-888-891-8332 (423)634-6389

Receipt: EAC-CH-3363 **Date of Receipt:** 20-Apr-2017 1:53 pm **Created By:** Karen May (BG55008)

County: Bradley **EFO/Office:** Chattanooga Field Office

Received From: City of Cleveland

Company/Affiliation:

Recipient Address: 190 Church St
CLEVELAND, TN- 37364

Amount Received: $250.00 **Method of Payment:** CHECK **Check Number:** 61349

Comments: NOI-City of Cleveland Fire Hall #6

Division	Description	TDEC Code	Quantity	Unit Price	Line Total
WPC	WPC-NOI $250 Permit Application	43.340.F02	1	$250.00	$250.00

Receipt Total: **$250.00**

Passpointe Engineering, PLLC
2719 Hickory Valley Road, Suite B
Chattanooga, Tennessee 37421
(423) 451-6601

Transmittal

passpointe
ENGINEERING

To: Jennifer Innes **From:** Jan Pass

Address: TDEC - Div. of Water Pollution Contol
1301 Riverfront Parkway, Suite #206
Chattanooga, TN 37402

Date: 4-20-17

Proj#: 16-053

Re: Fire Station #6 - Cleveland **CC:** File

☐ **Urgent** ☒ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **For Your Use**

- **Please find the following attached or enclosed:**

Date	Copies	No.	Description
4-18-17			Notice of Intent & USGS Map
4-20-17			$250 Fee Check
4-11-17			Storm Water Pollution Prevention Plan (SWPPP)
4-12-17			Construction Plan Set

- **Remarks:** _____

- **Received By:** _____

RECEIVED
APR 20 '17
ENVIRONMENT & CONSERVATION
CHATTANOOGA FIELD OFFICE

passpointe

STORM WATER POLLUTION PREVENTION PLAN

City of Cleveland Fire Hall #6
2190 Westland Drive, Cleveland, Tennessee

Project # 16-053

April 11, 2017

Prepared for:
City of Cleveland
160 Second Street
Cleveland, TN 37311

Contact: Melinda Carroll
Phone: (423) 559-3352

Prepared by:
Passpointe Engineering, LLC
2719 Hickory Valley Road, Suite B
Chattanooga, Tennessee 37421
(423) 451-6601

TABLE OF CONTENTS

1. Project and Site Description

a. Plan Development and Permittees –

This Storm Water Pollution Prevention Plan (SWPPP) has been developed in accordance with the Tennessee General NPDES Permit (TNR100000) for Storm Water Discharges Associated with Construction Activity (TNCGP), and has been prepared using sound engineering practices. This plan and all attachments are available to the local Environmental Assistance Center (EAC), along with the complete, correctly signed Notice of Intent (NOI). Construction will not proceed prior to receipt of a Notice of Coverage (NOC) from the Tennessee Department of Environmental and Conservation (TDEC).

Primary Permittee - Owner/Developer:

City of Cleveland
160 Second Street,
Cleveland, TN 37311

"I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."		
Representative of owner/developer and title; print or type Melinda B. Carroll Assistant City Manager	Signature (must be signed by president, VP, or equivalent, or ranking elected official) Melinda B. Carroll	Date 4-18-17

Secondary Permittee - Contractor:

"I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I *believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities onsite are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."*		
Company name of primary contractor; print or type	Signature (must be signed by president, VP, or equivalent)	Date

The individual responsible for installation, maintenance, and inspections of erosion and sediment control measures will be the **Secondary Permittee** who is awarded this project. He/she shall be familiar with the *Fundamentals of Erosion Prevention and Sediment Control* by the State of Tennessee.

Current versions of this SWPPP, the NOI, and the NOC will be kept on the site for the duration of the project. These items will be available for the use of all operators and site personnel involved with erosion and sediment controls, and will be available to TDEC personnel visiting the site. A notice will be posted near the construction entrance containing a copy of the NOI and NOC with the tracking number assigned by the EAC, the name and telephone number of a contact person for the development, a brief description of the project, and the location of the SWPPP and EPSC plans.

Any new contractor on the project that has any responsibility to install, inspect, or maintain erosion or sediment control measures will sign the contractor's certification on a copy of the NOI (Appendix A) and will submit it to the local EAC. Any correspondence with TDEC or any EAC will reference the tracking number assigned by TDEC to the project. The **Secondary Permittee/Contractor** will submit a Notice of Termination (NOT; Appendix B) after the complete installation and successful establishment of the final stabilization activities at the site.

It is the intention and goal of the TN Construction General Permit (TNCGP) and this SWPPP that any discharge from the property described in this document shall have no objectionable color contrast to the water body that receives it. The construction activity will be carried out in such a manner so as to prevent any discharge that would cause a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of the waters on the property or downstream of the property for fish and aquatic life, livestock watering and wildlife, recreation, irrigation, navigation, or industrial or domestic water supply.

This plan may be amended for reasons described below, or for other reasons. **When the plans are revised, the Contractor will implement the changes to erosion protection and sediment controls within 7 days after the need for modification is identified. (3.5.8.2.f)**

b. Existing Site Conditions –

The existing area proposed to be disturbed is located on Westland Drive, off of APD 40, in the Cleveland, Tennessee.

The project site is currently cleared and grassy, but undeveloped, being approx. 100% pervious. Stormwater runoff travels approx.1870 lf in roadside ditches to a wet-weather conveyance, which drains to an un-named tributary to South Mouse Creek. The total distance to S. Mouse Creek is approximately 3,500 lf, to the northeast of the parcel. (1.4.2, 3.5.1a)

The existing topography in the area of construction consists of gentle slopes on mostly original grades that drain to the southeast to an existing roadside swale. All storm water runoff from this area enters the swale and then flows in a northeastward direction to an unnamed tributary to the South Mouse Creek.

Information from the Soil Survey of Hamilton County, TN indicates that the soils present within the site are Fullerton gravelly silt loam (Fd), 12 to 25% slopes, eroded, in hydrologic soil group (HG) B, and Fullerton gravelly silt loam (Fe), 5 to 12% slopes, eroded, in HG-B. (See attached Soils Map.)

c. Project Description –

The nature of the construction activity entails excavation and haul off of material to maximum depths of 10-12 feet in areas for construction of a building pad and driveways for a new fire station. A gravity retaining wall will be constructed along the south property line,

and 5 bio-retention/treatment ponds will be constructed to slow and treat the stormwater runoff. Underground utility connections will be made. The finished site will be grassed, paved, and landscaped per City of Cleveland's Ordinances.
All disturbed areas will be paved with asphalt, concrete, and/or stabilized with vegetation.

Approximately 1.7 acres of the site are expected to be disturbed by grading, paving, and stormwater facilities. No offsite material storage areas are required.

d. Construction Activities –

The Secondary Permittee/Contractor shall be responsible for the timing and implementation of the controls. The site work has short time constraints and will be scheduled during months when it is most advantageous for grading and excavation work, as much as possible, thus limiting potential for erosion and sediment transport.

INITIAL PHASE EPSC SCHEDULE (3.5.2)

1. CONDUCT PRE CONSTRUCTION MEETING WITH EROSION CONTROL INSPECTOR.
2. STAKE OUT CLEARING LIMITS, ETC.
3. FIRST CONSTRUCTION ITEM: INSTALL CONSTRUCTION EXITS AND PERIMETER SILT FENCES. THESE MUST BE INSTALLED BEFORE EARTH MOVING BEGINS. (3.5.3.1)
4. CLEAR AREAS NEEDED FOR INSTALLATION OF SEDIMENT TRAPS.
5. INSTALL SEDIMENT TRAPS ALONG WITH DOWNSIDE SILT FENCE.
6. CONSTRUCT PROPOSED RETAINING WALL AND STABILIZE AREA BEHIND WALL.
7. PERFORM STRIPPING OF TOP SOIL.
8. PROVIDE TEMPORARY GRASSING / MULCHING @ 14 DAY INTERVALS.

INTERMEDIATE PHASE EPSC SCHEDULE (3.5.2)

1. BEGIN SITE MASS GRADING.
2. STABILIZE FINISHED SLOPES WITH PERMANENT SEEDING.
3. INSTALL UTILITIES (STORM, SANITARY, ELECTRIC, AND WATER) AND INSTALL APPROPRIATE TEMPORARY INLET/OUTLET PROTECTION.
4. SHAPE ROADSIDE SWALE ALONG WESTLAND DR. AND STABILIZE.
5. INSTALL DETENTION PONDS AND FILTRATION SYSTEMS.
6. CONVERT TEMPORARY SEDIMENT TRAPS TO DETENTION PONDS/FILTRATION SYSTEMS.
7. INSTALL SEDIMENT BARRIERS AROUND COMPLETED PONDS.
8. PERFORM BUILDING CONSTRUCTION.
9. MAINTAIN TEMPORARY GRASSING AND PERMENANT GRASSING @14 DAY INTERVALS, SILT FENCE, AND CONSTRUCTION ENTRANCE PER THIS PLAN AS THE GRADING PROGRESSES.

FINAL PHASE EPSC SCHEDULE (3.5.2)

1. INSTALL CURBING, PAVING.
2. ONCE STORM DRAIN TOPS INSTALLED, INSTALL INLET PROTECTION AT EACH STRUCTURE (FINAL PHASE BMPs).

3. MAINTAIN TEMPORARY GRASSING @14 DAYS INTERVALS, INSTALL PERMANENT GRASSING @ 30 DAY INTERVALS.
4. LANDSCAPING WILL BE PERFORMED AS SOON AS PRACTICABLE. APPROPRIATE PLANT MATERIAL INSTALLED AREA BY AREA AS SITE WORK PERMITS.
5. CLEAN STORM STRUCTURES. INSTALL WATER QUALITY DEVICES ON DETENTION PONDS AND ANY OTHER PERMANENT BMPS.
6. DEMUCK ALL STRUCTURAL BMP'S AND SAFELY DISPOSE OF MATERIAL.
7. REMOVE SILT FENCING AND OTHER TEMPORARY SEDIMENT/EROSION CONTROL BMP'S ONCE GROUND COVER IS ESTABLISHED.

e. Receiving Waters – **South Mouse Creek** (habitat and siltation impaired, non-supporting) (3.5.1.k)
All storm water runoff is received by an existing roadside swale and conveyed through ditches and fields to an unnamed tributary to South Mouse Creek. No changes are proposed to this existing system.

f. Protection to Limit Disturbance – The construction involves the entire site, limited on three sides by existing streets, an on the fourth side by previous development of a gas/convenience store. No additional controls are proposed.

g. Approved Local Government Requirements – Contractor shall comply with City of Cleveland stormwater requirements and the project plans and specifications.

h. Total Maximum Daily Loads Documentation – N/A

2. Stormwater Runoff Controls (3.5.2)

a. Description of BMPs, Activities, and Plans

During construction, stormwater flows will be contained within sediment tubes to slow the flows and to filter/capture sediments. Temporary sediment traps will be used to prevent sediment from entering the stormwater conveyance system. Construction exit and concrete wash-out areas are proposed.

The post-development storm water flows will enter the bio-retention ponds and be detained and filtered as it flows towards the Outfall. The proposed bio-retention ponds will also allow some infiltration. The post development runoff flows are less than pre-development flow for all storm events.

The existing roadside swale will be stabilized with turf reinforcing matting, seeded, and maintained. This will eliminate future erosion of the swale.

Muddy water from excavations and work areas that is pumped or otherwise physically removed, shall be held in sediment trap pond areas for filtering and/or infiltration prior to discharge to the outfall. This should be a minimal need if any at all.

All disturbed lawn areas are proposed to be seeded, fertilized and mulched within 14 days of completion of grading operations.

b. Erosion Prevention and Sediment Control BMPs (3.5.3) –

i. General Criteria –

Construction Phase erosion prevention and sediment controls are designed to minimize the erosion and suspension of the soils in water. Any escaped accumulations of sediment will be removed to minimize impacts to the system.

Sediment shall be removed from sediment traps, silt fences, and other sediment controls as necessary and when capacity has been reduced by 50%. Contractor shall control, contain, and prevent litter, construction debris, and construction chemicals and prevent it from being carried off the site by wind or storm water. After use, materials used for erosion prevention and sediment control shall be removed or otherwise prevented from becoming a pollutant source. EPSC controls shall be installed prior proceeding with construction activities.

ii. Stabilization Practices – Temporary and Permanent (3.5.3.2)

1) Temporary stabilization shall include topsoil and temporary seeding until construction activities and weather permit permanent seeding and landscaping.

2) Any area where construction has temporarily or permanently ceased shall be stabilized within 14 days.

3) Permanent stabilization includes permanent seeding, installation of channel turf reinforcing mat, bio-retention soils and mulch, and landscape plantings.

4) Steep slopes (>35°, 2.8:1) shall be stabilized no later than seven days (7) after construction activity on slope has temporarily or permanently ceased.

iii. Structural Practices (3.5.3.3)

1) Structural practices are prepared per Tenn. Erosion and Sediment Control Handbook and are designed to minimize effects of applicable 2 yr and 5 yr design storm depths. These controls are designed to handle the rainfall runoff from all storm events.

2) Runoff and discharge of pollutants from exposed areas is limited, reduced, or diverted by the use of the following:

- temporary tube berm - diverts water from street with broken curb
- silt fencing - slow flows and entrap sediments
- stone construction exit - collects sediment from vehicle tires
- temporary pond depressions - collects and slows down site runoff, allowing sediment to fall out
- rock outlet protection and TRM - protects and repairs existing channel from erosion

iv. Other Items Needing Control Practices (3.5.5)

1) No solid materials, including building materials shall be placed in Waters of the State.

2) EPSC measures for installation of waste disposal system, sanitary sewer or septic system – N/A.

3) Contractor shall control the offsite tracking of sediments by the installation and maintenance of construction entrance BMP's as shown on the plans. Dust shall be minimized by effective scheduling and sequencing of construction phases. Concrete truck washout and refueling of equipment shall be performed upstream of the sediment as indicated in the plans and details.

4) Petroleum Based Products - All fueling of equipment and vehicles on site will be conducted near the northwest end of the proposed structure, or at another single designated location selected by the Contractor. Any spillage shall be contained and

removed immediately through the use of filter socks or other approved means. Contaminated soils will be placed on heavy plastic and covered or placed into approved containers to prevent contact with storm water. Oils, other vehicle fluids, paints, and solvents will be stored in the construction trailer or other temporary storage structure. Any spill in excess of two gallons will be reported to the project Superintendent and the Engineer.

5) Containers for products such as fuels, lubricants, and tars will be inspected daily for leaks and spills. This includes on-site vehicle and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas will be located away from State water, natural drains, and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oils and lubricants is prohibited. Proper disposal methods will include collection in a suitable container and disposal as required by local and State regulations.
6) Paints/Finishes/Solvents - All products will be stored in tightly sealed original containers when not in use. Excess product will not be discharged to the storm water collection system. Excess product, materials used with these products and product containers will be disposed of according to manufacturer's specifications and recommendations.
7) Concrete Truck Washing - Concrete trucks will be allowed to wash out or discharge surplus concrete or drum water onsite at the location of the Washout BMP, located near the north entrance.
8) Fertilizers/Herbicides - These products will be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the Tennessee Erosion and Sediment Control Handbook. Any storage of these materials will be under roof in sealed containers.
9) Building Materials - No building or construction materials will be buried or disposed of on-site. All such material will be disposed of by proper waste disposal procedures.

iv. Measures for Non-Stormwater Discharges (3.5.9)
The attached EPSC Plan sheets and Drainage Maps indicate the construction work boundaries and disturbed areas, drainage sub-basins, post-construction slopes, and sub-basin outfalls. There are no wetlands at the site. There are no proposed industrial activity discharges.

3. Post-Construction Stormwater Management (3.5.4)

1. Stormwater management measures controlling pollutants in stormwater discharges after construction include bio-retention ponds, flat grassy swales, and landscaped beds and lawns.
2. The post-developed peak flows at the Outfall are reduced to less than pre developed flows (See Hydrology Report). The velocity was increased due to concentrated pipe flow; therefore, dissipation measures are added at the pipe outfall with stone riprap outlet protection.
   - Q25pre = 10.26 cfs V25pre = 5.96 fps
   - Q25post = 8.85 cfs V25post = 5.79 fps
3. Regular weekly/monthly review of site conditions shall be performed by Permittee to ensure that vegetation, erosion prevention, and sediment control measures, etc. are kept in good and effective operating condition. Maintenance needs identified in inspections of by other

means shall be accomplished before the next storm event, but in no case more than seven (7) days after the need is identified. (3.5.7, 3.5.8.2)

4. Maintenance and Training (3.5.7)

a. Long-Term Maintenance –

Periodic checking of the bio-retention pond's porous surface materials (mulch, river-stone, etc.) and rate of storm water percolation will help to ensure it will remain functional as designed. The following chart should be followed, at a minimum, for the bio-retention pond's scheduled maintenance:

Table 4: Suggested Annual Maintenance Activities for Bioretention.

Maintenance Tasks	Frequency
• Mowing of grass filter strips and bioretention turf cover	At least 4 times a year
• Spot weeding, erosion repair, trash removal, and mulch raking	Twice during growing season
• Add reinforcement planting to maintain the desired vegetation density • Remove invasive plants using recommended control methods • Stabilize the contributing drainage area to prevent erosion	As needed
• Spring inspection and cleanup • Supplement mulch to maintain a 3 inch layer • Prune trees and shrubs	Annually
• Remove sediment in pre-treatment cells and inflow points	Once every 2 to 3 years
• Replace the mulch layer	Every 3 years

(TN Permanent Stormwater Management and Design Guidance Manual, 1st Ed.)

5. Inspections (3.5.8)

a. During Construction - Erosion and sediment control measures and other protective measures identified in the site SWPPP shall be kept in good and effective operating condition. Maintenance needs identified in inspections or by other means, shall be accomplished before the next storm event if possible, but in no case more than seven days after the need is identified.

The Primary Contractor shall be responsible for implementation of the SWPPP and shall ensure, either directly or through coordination, that others accessing the site do not render the pollution controls ineffective.

b. Inspections –

1. Inspections shall be performed at least twice every calendar week, and at least 72 hours apart, by Qualified Personnel. Qualified Personnel shall meet requirements of the Permit. (3.5.8.1, 3.5.8.2.a & b)
2. Site Outfalls and erosion prevention and sediment control measures shall be checked twice weekly and repaired if necessary. In the event of continuous rainfall, control measures shall be checked daily. (3.5.8.2.a)

3. EPSC measures shall be observed to ensure they are operating correctly. Inspection areas shall include:
   a. All disturbed areas and areas used for storage of materials that are exposed to precipitation.
   b. Outfall points
   c. Vehicle entry and exit points
   d. Structural control measures, etc.
4. Based on results of inspection, any inadequate control measures or control measures in disrepair shall be replaced, modified or repaired as necessary, before the next rain event, but in no case more than seven (7) days after the need is identified. (3.5.7, 3.5.8.2.e)
5. Based on results of inspection, the site description and pollution prevention measures in the SWPPP shall be revised as appropriate, but in no case later than seven (7) days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than fourteen (14) days following inspection. (3.5.8.2.f)
6. All inspections shall be documented on the standard Construction Stormwater Inspection Certification forms, or alternate/equivalent forms, by trained certified inspectors. (3.5.8.2g & h)
7. Erosion control measures shall be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.

6. Record Keeping (6.1, 6.2, 6.3)

a. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part 8 of the Permit: (6.1)
   1) A copy of Notice of Intent submitted, and of Notice of Coverage received from TDEC;
   2) Copies of Storm Water Pollution Prevention Plans and Erosion Prevention and Sediment Control Plans;
   3) A copy of the NPDES Permit TNR 100000.
   4) A copy of the qualified Inspector's certification, or training record for inspector certification. (3.5.8.1)
   5) Records of dates when major grading activities occur; dates when construction activities temporarily or permanently cease on a portion of the site; dates when stabilization measures are initiated; inspection records, and rainfall records. (3.5.3.1.m)

   Permittees with day-to-day operational control over SWPPP implementation shall have a copy of the SWPPP available at a central location onsite for the use of all operators and those responsible under the plan whenever they are on the construction site.

b. The permittee shall make updated plans and inspection reports available upon request to the director; the local agency approving erosion prevention and sediment control plans, grading plans, land disturbance plans or stormwater management plans; or the operator of an MS4. (3.3.2)
c. A copy of the current version of the SWPPP shall be retained on-site at the location which generates the stormwater discharge in accordance with Part 6 of the Permit. If the site is inactive or does not have an onsite location adequate to store the SWPPP, the location of the SWPPP,

along with a contact phone number, shall be posted on-site. If the SWPPP is located offsite, reasonable local access to the plan, during normal working hours, must be provided. (3.3.3)

d. SWPPP modifications and updates must be made under any of the following conditions: (3.4.1)
   1) Change in scope with significant effect not previously addressed;
   2) Whenever inspections or investigations indicate ineffective measures or non achievement of general objectives
   3) Whenever necessary to prevent a negative impact to legally protected state or federally listed fauna or flora, etc.
   4) Whenever a TMDL is developed for the receiving waters for a pollutant of concern.

e. The permitee shall retain copies of SWPPPs, reports required by this Permit, records of all data used to complete the NOI and the NOT for a period of at least three years from the date the NOT was submitted. This period may be extended by written request of the director. (6.2)

7. Non-Storm Water Discharges

All fueling of equipment and vehicles on site will be conducted upstream of the existing pond basin as indicated in the plans and details. Any spillage shall be contained and removed immediately through the use of filter socks or other approved means. Contaminated soils will be placed on heavy plastic and covered or placed into approved containers to prevent contact with storm water. All fuel tanks will be in the fueling/containment area. Oils and other vehicle fluids will be stored offsite or other temporary storage structure. Any spill in excess of two gallons will be reported to the project Superintendent and the Engineer.

If a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period, the Contractor will immediately notify the Permittee who shall then do the following:

1. **Notify the National Response Center (NRC) at 800-424-8802.**
2. **Notify the Tennessee Emergency Management Agency (TEMA) at 800-262-3300; for non-emergencies at 800-262-3400.**
3. **Notify the local Environmental Assistance Center at 423-634-5745.**

Also, the Primary Contractor will provide a revision of this document to identify measures to prevent the reoccurrence of such releases.

Each Contractor is responsible to provide litter control for trash generated by his crew. A container shall be located near the construction trailer and is limited to garbage and paper trash only. Paint cans, oil cans, used oil, and filters will be contained and disposed of by the Contractor taking them to the City of Chattanooga Recycle Center.

APPENDIX A

Maps:

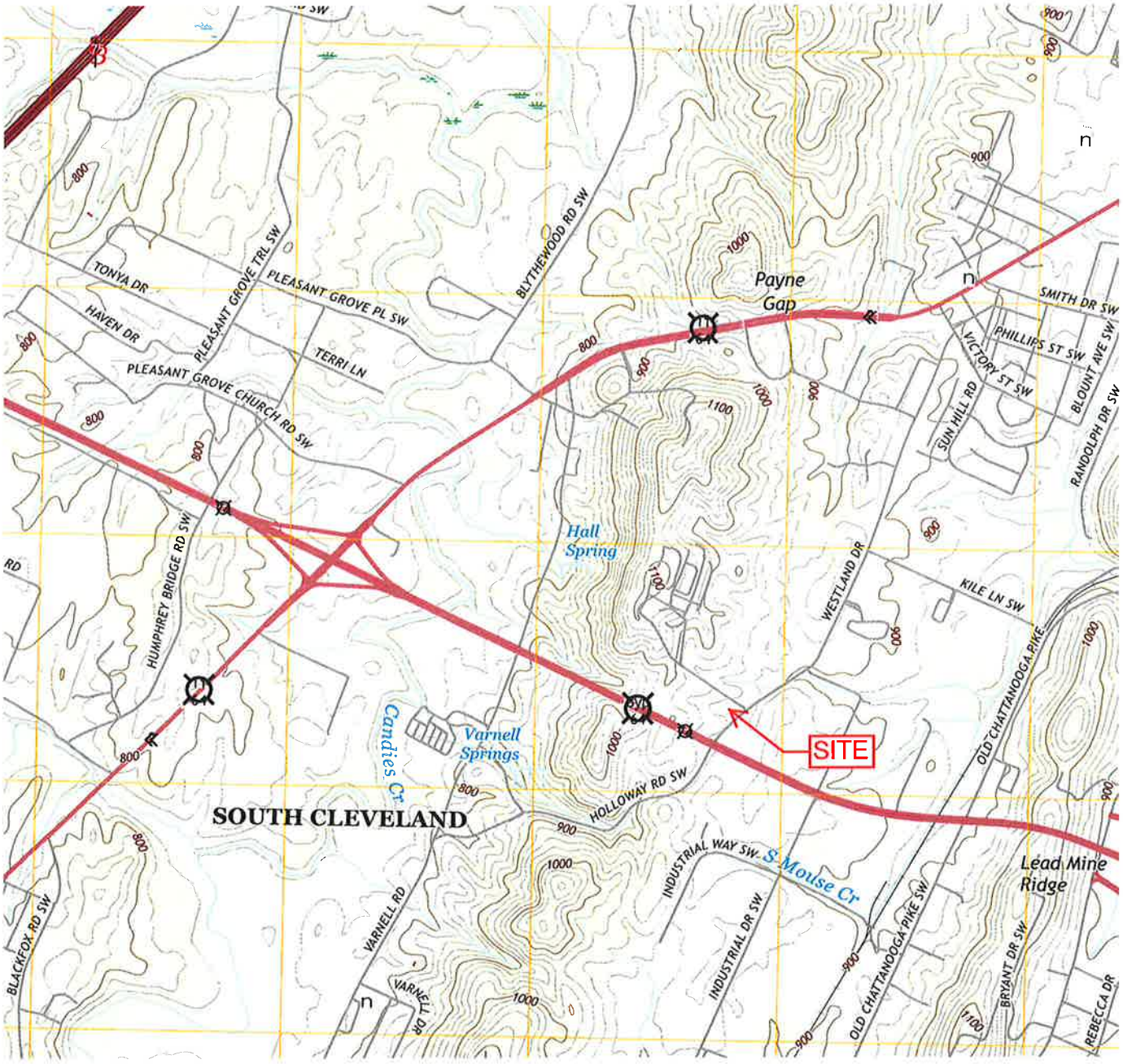
General Location Map (USGS)

Site

Soils

FEMA

CLEVELAND FIRE HALL #6
2190 Westland Drive, Cleveland, TN



LOCATION MAP FROM USGS TOPO DATA
Quad Sheet South Cleveland, TN 2016
1:24 000

MAP SCALE 1" = 500'

500 1000 FEET

FLOOD INSURANCE RATE MAP

BRADLEY COUNTY, TENNESSEE

AND INCORPORATED AREAS

PANEL 119 OF 325

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BRADLEY COUNTY	470357	0119	E
CLEVELAND, CITY OF	470015	0119	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
47011C0119E

EFFECTIVE DATE
FEBRUARY 2, 2007

Federal Emergency Management Agency

Custom Soil Resource Report
Soil Map

Bradley County, Tennessee

Fd—Fullerton gravelly silt loam, 12 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2szj7
Elevation: 680 to 1,570 feet
Mean annual precipitation: 45 to 58 inches
Mean annual air temperature: 55 to 58 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Fullerton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fullerton

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy creep deposits derived from cherty limestone over clayey residuum weathered from cherty limestone

Typical profile

A - 0 to 2 inches: gravelly silt loam
BE - 2 to 9 inches: gravelly silty clay loam
Bt1 - 9 to 19 inches: gravelly silty clay loam
Bt2 - 19 to 60 inches: gravelly clay
Bt3 - 60 to 90 inches: gravelly clay

Properties and qualities

Slope: 12 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Bodine

Percent of map unit: 8 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope, toeslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Dewey

Percent of map unit: 4 percent
Landform: Ridges, stream terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Minvale

Percent of map unit: 3 percent
Landform: Drainageways on ridges
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, side slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Fe—Fullerton gravelly silt loam, 5 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2szj6
Elevation: 680 to 1,580 feet
Mean annual precipitation: 45 to 58 inches
Mean annual air temperature: 56 to 58 degrees F
Frost-free period: 180 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Fullerton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fullerton

Setting

Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex
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Parent material: Loamy creep deposits derived from cherty limestone over clayey residuum weathered from cherty limestone

Typical profile

A - 0 to 2 inches: gravelly silt loam
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Bt1 - 12 to 19 inches: gravelly silty clay loam
Bt2 - 19 to 60 inches: gravelly clay
Bt3 - 60 to 90 inches: gravelly clay

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: **B**
Hydric soil rating: No

Minor Components

Bodine

Percent of map unit: 8 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope, toeslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Dewey

Percent of map unit: 4 percent
Landform: Ridges, stream terraces
Landform position (two-dimensional): Backslope
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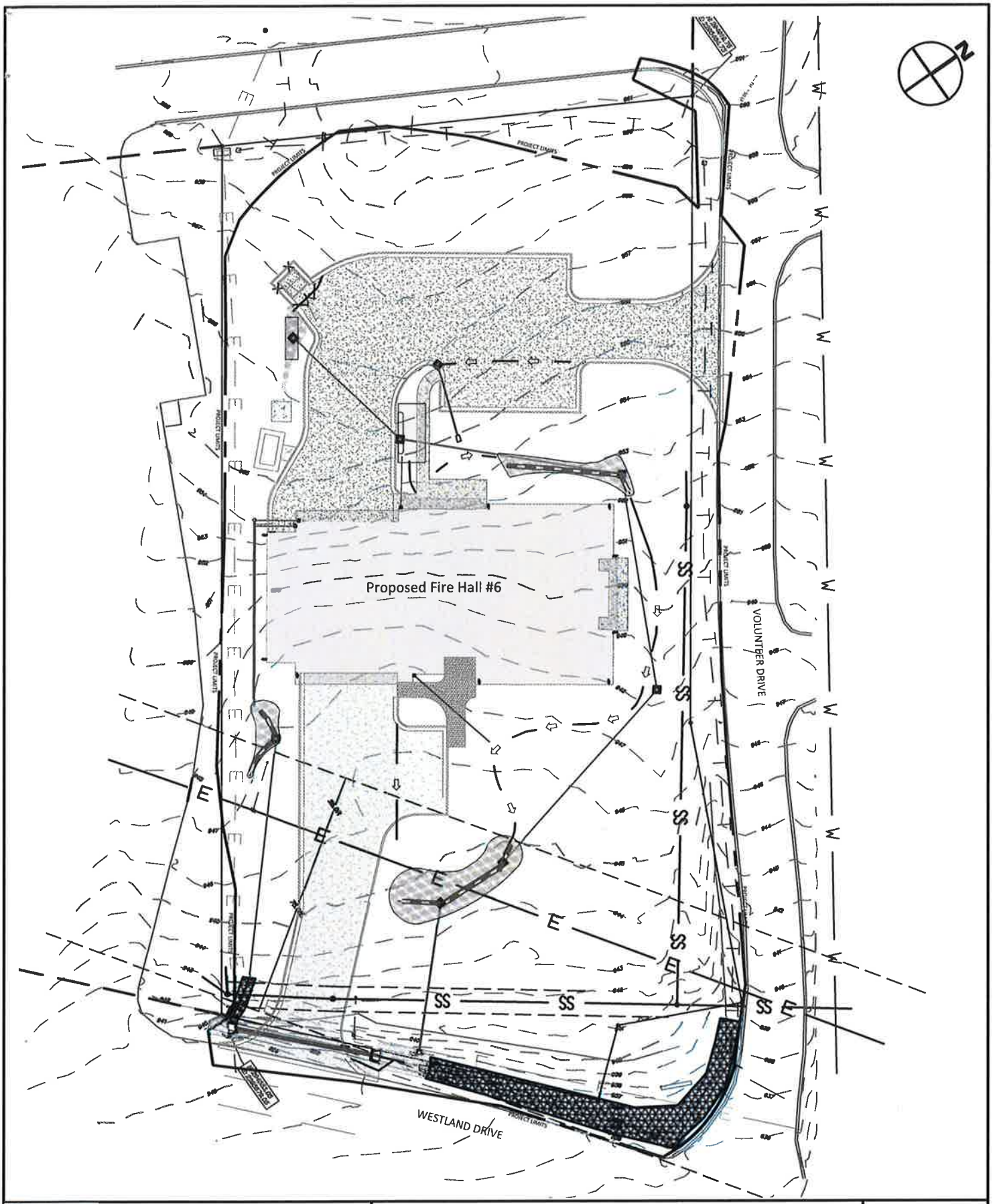
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Minvale

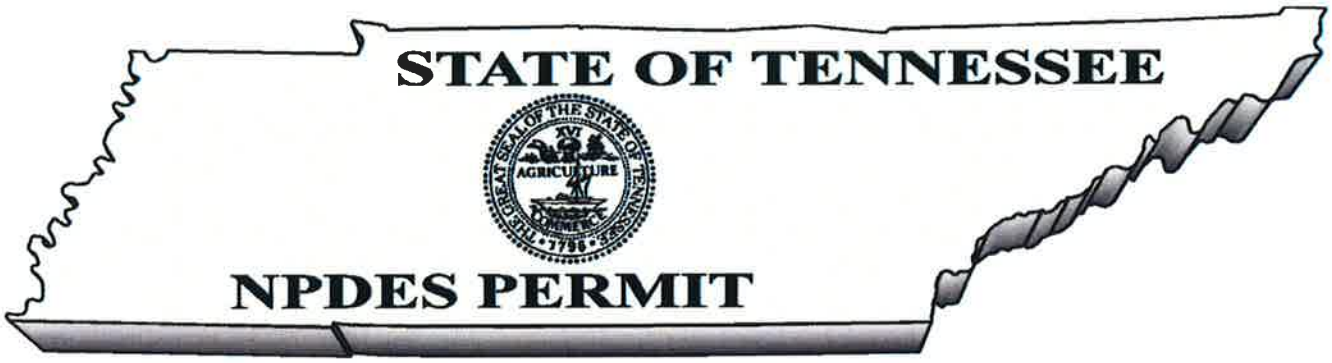
Percent of map unit: 3 percent
Landform: Drainageways on ridges
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, side slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave



Passpointe Engineering, PLLC 2719 Hickory Valley Rd, Suite B Chattanooga, Tennessee 37421	Fire Station #6 - Site Map		SW0.4
	DATE: 01-18-17 SCALE: 1" = 50'	PRJ. NO. 16-053	

APPENDIX B

Construction General Permit TNR 100000



GENERAL NPDES PERMIT FOR DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

PERMIT NO. TNR100000

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the authorization by the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.) and the Water Quality Act of 1987, P.L. 100-4, including special requirements as provided in part 5.4 (Discharges into Waters with Unavailable Parameters or Exceptional Tennessee Waters) of this general permit, operators of point source discharges of stormwater associated with construction activities into waters of the State of Tennessee, are authorized to discharge stormwater associated with construction activities in accordance with the following permit monitoring and reporting requirements, effluent limitations, and other provisions as set forth in parts 1 through 10 herein, from the subject outfalls to waters of the State of Tennessee.

This permit is issued on: **September 30, 2016**

This permit is effective on: **October 1, 2016**

This permit expires on: **September 30, 2021**

for Tisha Calabrese Benton
Director

CN-0759

RDA 2366

*Cover of permit only. See http://www.tn.gov/environment/article/permit-water-npdes-stormwater-construction-permit for full permit document.

APPENDIX C

Notice of Intent

Notice of Termination

(To be completed and submitted to the local EAC when all construction and stabilization activities have been completed, and stabilization measures are effective, or if the operator's responsibilities at this site have ended.)

Environmental Assistance Center
TDEC – Division of Water Pollution Control
540 McCallie Avenue, Suite 550
Chattanooga, TN 37401-2013

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, TN 37243
Toll Free Number: 1-888-891-TDEC (8332)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: City of Cleveland Fire Hall #6		**Existing NPDES Tracking Number: TNR**	
Street Address or Location: 2190 Westland Dr, Cleveland, TN 37311		Start date:	05/29/17
		Estimated end date:	05/28/18
Site Activity Description: municipal fire hall construction		Latitude (dd.dddd):	35.13885
		Longitude (-dd.dddd):	-84.90654
County(ies): Bradley	MS4 Jurisdiction: City of Cleveland	Acres Disturbed:	1.72
		Total Acres:	1.62

Does a topographic map show dotted or solid blue lines ☑ and/or wetlands ☐ on or adjacent to the construction site?
If wetlands are located on-site and may be impacted, attach wetlands delineation report.
If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number? ARAP permit No.: N/A

Receiving waters: unnamed tributary to South Mouse Creek

Attach the SWPPP with the NOI: ☑ SWPPP Attached | Attach a site location map: ☑ Map Attached

Site Owner/Developer Entity (*Primary Permittee*): (person, company, or legal entity that has operational or design control over construction plans and specifications): City Of Cleveland

Site Owner/Developer Signatory (V.P. level/higher - signs certification below): (individual responsible for site):		Signatory's Title or Position (V.P. level/higher - signs certification below):	
Mailing Address: City of Cleveland, 160 Second St.		City: Cleveland	State: TN Zip: 37311
Phone: ( )	Fax: ( )	E-mail:	

Optional Contact:		Title or Position:	
Mailing Address:		City:	State: Zip:
Phone: ( )	Fax: ( )	E-mail:	

Owner or Developer Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Owner or Developer Name (print or type):	Signature:	Date:

Contractor(s) Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)

I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated.

Contractor company name (print or type):

Contractor signatory (print/type) (V.P. level or higher):		Signature:	Date:
Mailing Address:		City: State:	Zip:
Phone: ( )	Fax: ( )	E-mail:	

Other Contractor company name (print or type):

Other Contractor signatory (print/type) (V.P. level or higher):		Signature:	Date:
Mailing Address:		City: State:	Zip:
Phone: ( )	Fax: ( )	E-mail:	

OFFICIAL STATE USE ONLY

Received Date:	Reviewer:	Field Office:	Permit Number **TNR:**	Exceptional TN Water:
Fee(s):	T & E Aquatic Flora and Fauna:		Impaired Receiving Stream:	Notice of Coverage Date:

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Purpose of this form: A completed notice of intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activity (permit). **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to be in compliance with permit terms and conditions.** This permit is required for stormwater discharge(s) from construction activities including clearing, grading, filling and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

Permit fee: The correct permit fee (see table below) must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g. equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites).

Acres Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 20 < 50 acres	= or > 5 < 20 acres	= or > 1 < 5 acres	Subsequent coverage*
Fee	$10,000	$6,000	$3,000	$1,000	$250	$100

* Subsequent Primary Operators seeking coverage under an actively covered larger plan of development or sale

Who must submit an NOI: Per Section 2 of the permit, all site operators must submit an NOI form. "Operator" for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current land owner of the construction site. This person is considered the primary permittee; or (2) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 of the permit and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage.

Notice of Coverage: The division will review the NOI for completeness and accuracy and prepare a notice of coverage (NOC). Stormwater discharge from the construction site is authorized as of the effective date of the NOC.

Complete the NOI: Type or print clearly, using ink and not markers or pencil. Answer each item or enter "NA," for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee, a map, and the SWPPP.**

Describe and locate the project: Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads and structures; e.g. intersection of state highways 70 and 100). Latitude and longitude (expressed in decimal degrees) of the center of the site can be located on USGS quadrangle maps. The quadrangle maps can be obtained at the USGS World Wide Web site: http://www.usgs.gov/; latitude and longitude information can be found at numerous other web sites. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

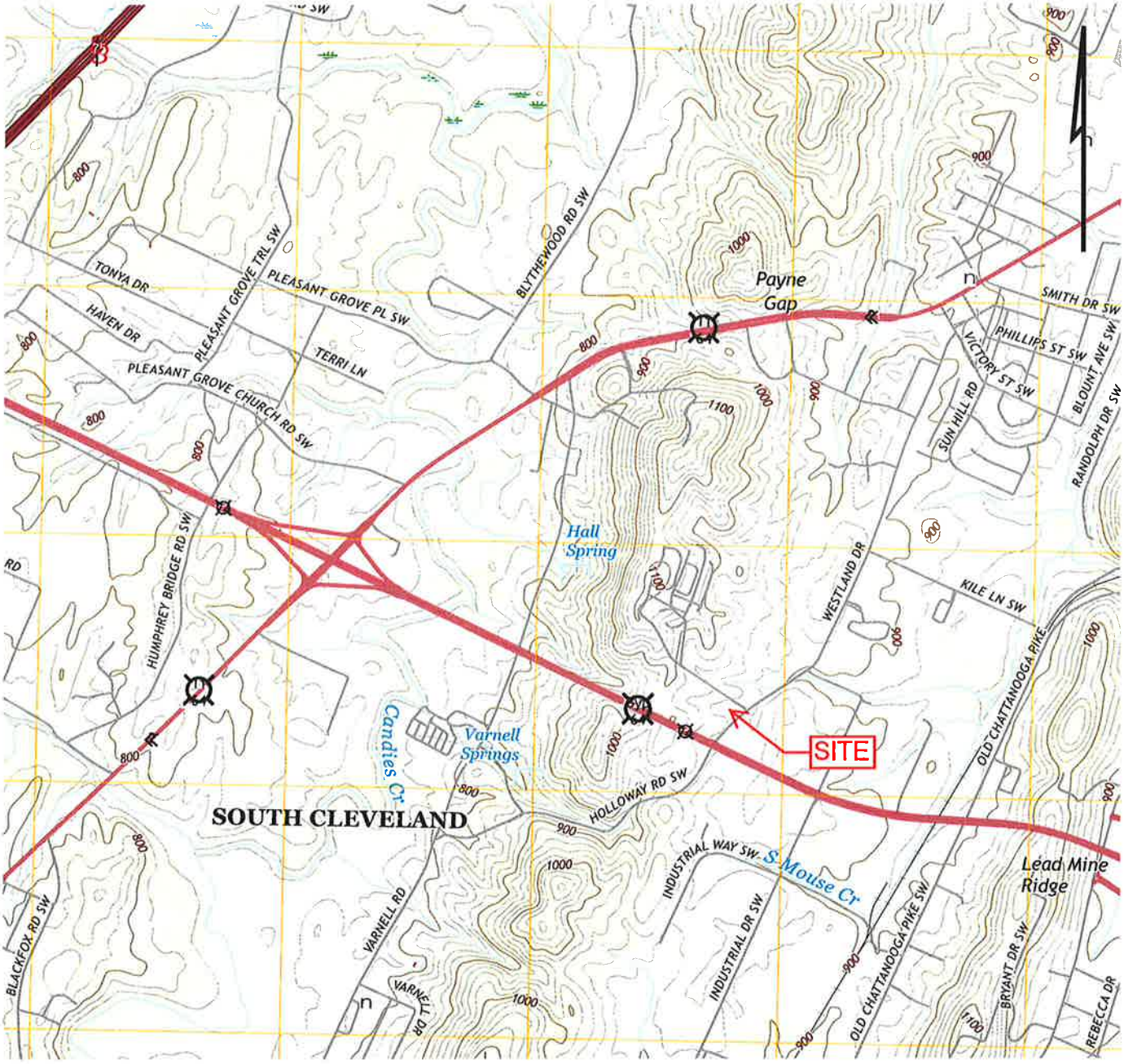
MS4 Jurisdiction: If this construction site is located within a Municipal Separate Storm Sewer System (MS4), please list the MS4 name. A list of MS4s may be found at: http://www.tn.gov/environment/article/permit-water-stormwater-discharges-permitting

Give name of the receiving waters: Trace the route of stormwater runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the stormwater runoff drains. Note that the receiving water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed ("unnamed tributary"), determine the name of the water body that the unnamed tributary enters.

ARAP permit may be required: **If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP).** If you have a question about ARAP permits, contact your local Environmental Field Office (EFO).

Submitting the form and obtaining more information: Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888- 891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Stormwater NOI Processing**.

EFO:	Street Address:	Zip Code:	EFO:	Street Address:	Zip Code:
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Parkway, Suite 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



LOCATION MAP FROM USGS TOPO DATA

Quad Sheet South Cleveland, TN 2016

1:24 000

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-TDEC (8332)

Notice of Termination (NOT) for General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the local DWR Environmental Field Office (EFO) address (see table below). For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Type or print clearly, using ink.

Site or Project Name: City of Cleveland Fire Hall #6	**NPDES Tracking Number: TNR**
Street Address or Location: 2190 Westland Dr, Cleveland, TN 37311	County(ies): Bradley

Name of Permittee Requesting Termination of Coverage:			
Permittee Contact Name:	Title or Position:		
Mailing Address: City of Cleveland, 160 Second St.	City: Cleveland	State: TN	Zip: 37311
Phone:	E-mail:		

Check the reason(s) for termination of permit coverage:

☐	Stormwater discharge associated with construction activity is no longer occurring and the permitted area has a uniform 70% permanent vegetative cover OR has equivalent measures such as rip rap or geotextiles, in areas not covered with impervious surfaces.
☐	You are no longer the operator at the construction site (i.e., termination of site-wide, primary or secondary permittee coverage).

Certification and Signature: (must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of stormwater discharges associated with construction activity means that all stormwater discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have been eliminated from the portion of the construction site where the operator had control. Specifically, this means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized, the temporary erosion and sediment control measures have been removed, and/or subsequent operators have obtained permit coverage for the site or portions of the site where the operator had control.

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Permittee name (print or type):	Signature:	Date:

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett, TN	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	1301 Riverfront Parkway, Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

APPENDIX D

Inspection Reports

(To be maintained by the Site Operator)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)

Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

Construction Stormwater Inspection Certification (Twice-Weekly Inspections)

Site or Project Name: City of Cleveland Fire Hall #6		**NPDES Tracking Number: TNR**
Primary Permittee Name: City of Cleveland		Date of Inspection:
Current approximate disturbed acreage: 1.72	Has rainfall been checked/documented daily? ☐ Yes ☐ No	Name of Inspector:
Current weather conditions:		Inspector's Training Certification Number:

Please check the box if the following items are on-site:

☐ Notice of Coverage (NOC) ☐ Stormwater Pollution Prevention Plan (SWPPP) ☐ Twice-weekly inspection documentation

☐ Site contact information ☐ Rain Gage ☐ Off-site Reference Rain Gage Location: _____

Best Management Practices (BMPs):

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly: If "No," describe below in Comment Section		
1. Are all applicable EPSCs installed and maintained per the SWPPP?	Yes	No
2. Are EPSCs functioning correctly at all disturbed areas/material storage areas per section 4.1.5?	Yes	No
3. Are EPSCs functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts per section 5.3.2?	☐ Yes	☐ No
4. Are EPSCs functioning correctly at ingress/egress points such that there is no evidence of track out?	☐ Yes	☐ No
5. If applicable, have discharges from dewatering activities been managed by appropriate controls per section 4.1.4? If "No," describe below the measures to be implemented to address deficiencies.	☐ Yes	☐ No
6. If construction activity at any location has temporarily/permanently ceased, was the area stabilized within 14 days per section 3.5.3.2? If "No," describe below each location and measures taken to stabilize the area(s)	☐ Yes	☐ No
7. Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters per section 4.1.5? If "No," describe below the measures to be implemented to address deficiencies.	☐ Yes	☐ No
8. If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No," describe below the measures to be implemented to address deficiencies. ☐ N/A	☐ Yes	☐ No
9. Have all previous deficiencies been addressed? If "No," describe remaining deficiencies in Comment section. ☐ Check if deficiencies/corrective measures have been reported on a previous form.	☐ Yes	☐ No

Comment Section. If the answer is "No" for any of the above, please describe the problem and corrective actions to be taken. Otherwise, describe any pertinent observations:

Certification and Signature (must be signed by the certified inspector and the permittee per Sections 3.5.8.2 (g) and 7.7.2 of the CGP)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Inspector Name and Title:	Signature:	Date:
Primary Permittee Name and Title:	Signature:	Date:

Construction Stormwater Inspection Certification Form (Twice-Weekly Inspections)

Purpose of this form/ Instructions

An inspection, as described in section 3.5.8.2. of the General Permit for Stormwater Discharges from Construction Activities ("Permit"), shall be performed at least twice every calendar week and documented on this form. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

As described in section 3.5.8.1 of the Permit, inspectors performing the required twice weekly inspections must have an active certification by completing the "Fundamentals of Erosion Prevention and Sediment Control Level I" course (http://www.tnepsc.org/). Twice weekly inspections can also be performed by: a licensed professional engineer or landscape architect; a Certified Professional in Erosion and Sediment Control (CPESC) or a person who has successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course. A copy of the certification or training record for inspector certification should be kept on site.

Qualified personnel, (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 3.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 3.5.2 of the Permit, shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form and the permittee has obtained a written approval from the division to use the alternative form. Inspection documentation will be maintained on site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request.

Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

APPENDIX E

Subcontractor Certifications/Agreements (if needed)

APPENDIX F

Stormwater Report Summary

STORMWATER DESIGN
&
MANAGEMENT PLAN

For

City of Cleveland Fire Hall #6

at
2190 Westland Drive
Cleveland, Tennessee 37311

PROJECT NO. 16-053

Prepared for:
City of Cleveland
160 Second Street
Cleveland, Tennessee 37311

Client Contact
Melinda Carroll
Assistant City Manager

March 6, 2017

Prepared by:
Passpointe Engineering, PLLC
2719 Hickory Valley Road, Suite B
Chattanooga, TN 37421
(423) 451-6601

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I. STORMWATER CALCULATION SUMMARY SHEETS

PROJECT NAME Cleveland Fire Hall #6 **DATE** 4/6/2017

ADDRESS 2190 Westland Dr.
Cleveland, TN 37311

HYDROLOGIC METHOD USED :

- ☐ Rational
- ☐ Modified Rational
- ☑ SCS

w/SCE 24hr storm durations (Check One)

TOTAL AREA (Acreage) 1.72

PRE-CONSTRUCTION CONDITIONS

Pervious Area, Ac	1.72	C or CN Factor	79
Impervious Area, Ac	-	C or CN Factor	-
Time of Concentration	7.8	Method for Tc	Lag CN

POST-CONSTRUCTION CONDITIONS

Pervious Area, Ac	1.10	C or CN Factor	74
Impervious Area, Ac	0.62	C or CN Factor	98
Time of Concentration	7.7	Method for Tc	Lag CN

RUNOFF RESULTS - Area 2 (see Report for Area 1)

Storm Event	Pre-Development Peak Flowrate, cfs	Post-Development Peak Flowrate, cfs	Routed/Combined Flowrate, cfs
2 year	4.85	5.66	4.10
5 year	6.71	7.61	5.56
10 year	8.18	9.15	6.73
25 year	10.26	11.30	8.85
100 year	13.63	14.80	12.16

DETENTION VOLUME REQUIRED, cubic feet No Additional Detention Required

MULTI-STAGE OUTLET REQUIRED ☐ Yes ☑ No (check)

FIRST FLUSH VOLUME, cubic feet 2,267 cf required, 2,709 cf provided

WATER QUALITY TREATMENT METHOD bio-retention soil and stone filtering

PROFESSIONAL ENGINEER CERTIFICATION

NAME Jan C. Pass

SIGNATURE

TN PE LICENSE 20772

II. Design and Data Summary

A. Description and Design Requirements –

The project site consists of single, grassy, 1.72 acre parcel containing 5-6% slopes. The site was previously cleared, but undeveloped, being approx. 100% pervious. Stormwater runoff travels approx. 1870 lf in roadside ditches to a wet-weather conveyance that feeds to an un-named tributary to South Mouse Creek. The total distance to S. Mouse Creek is approximately 3,500 lf, to the northeast of the parcel.

The design requirements are 1) to control peak outflow as much as possible for all storm events to no more than the peak outflow associated with the pre-development runoff coefficient; 2) to store the 25 yr storm; 3) to route the 50 and 100 yr storms; and 4) to provide "first-flush" treatment for the first one inch rainfall.

Treatment is provided by a series of bio-retention ponds. These ponds intercept all but 12% of the impervious area runoff. The impervious area that bypasses is the front driveway, which drains into the existing roadside ditch. This ditch is proposed to be re-shaped and stabilized with a seeded, turf reinforcing mat. The runoff from the entrance drive would then flow approximately 125 feet in the improved, grassy swale before leaving the site.

B. Data Summary -

Total Drainage Area = 1.72ac
Flood elevation: site is above 100-yr elevation per FEMA Map 47011C0119E, November 2, 2007
24-hr Precipitation: NOAA Atlas 14 (req. per TDEC SWPPP)

Bradley Co. 24-hr Rainfall Amounts per Return Period (in)						
1yr	2yr	5yr	10yr	25yr	50yr	100yr
3.05	3.65	4.45	5.07	5.93	6.61	7.31

1. Pre-development - Tc = 7.8 minutes
   Impervious Area = 0.0 ac — CN=N/A
   Pervious Area =1.72 (50-75% grass cover) — CN=79
   Pre-Development Runoff Coefficient — CN_w=79

2. Post-development - Tc = 3.0 min. avg. all sub-catchments,
   Impervious Area = 0.55 ac — CN=98
   Pervious Area=1.17 (>75% grass cover) — CN=74
   Post-Development Runoff Coefficient — CN_w=82

3. Peak Flows Summary -

Peak Flows (cfs)	2yr	5yr	10yr	25yr	50yr	100yr
Rainfall:	3.62	4.42	5.04	5.89	6.57	7.26
Pre-development	4.85	6.71	8.18	**10.26**	11.92	13.63
Post-development	5.66	7.61	9.15	**11.3**	13.02	14.8
Routed/Combined	**4.12**	**5.57**	**6.75**	**8.87**	**11.22**	**12.17**

4. First-Flush Treatment Volumes -

Total Site Impervious Area = 27,206 sf (0.55 ac)

	(in)		(sf)		Required (cf)	Provided (cf)
Outfall	1.00 /	12 *	27,206	=	2,267	2,709
					2,267	2,709

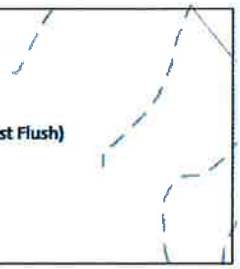
The proposed bio-retention ponds are designed to provide 2,709 cf of water quality treatment. See Pond Summaries below:

POND #1 - Bio-Retention
Drainage Subbasin: 1S = 7,570 sf (0.09 ac)
Total Impervious Area: 3,689 sf (0.08 ac)
1st Flush Vol.: 307 cf (Required)
Total Available Storage: 1,743 cf (Total)
65 cf Amended Soils (325.5 cy = 217 sf @ 1.5' deep), 20% & 40% Voids (First Flush)
247 cf Ponding Below Pond Outlet (First Flush)
1,428 cf Ponding Above First Flush
Treated Storage: 315 cf
100 yr elev.: 947.80 ; 25yr elev: 947.48

POND #2 - Bio-Retention
Drainage Subbasin: 2S = 13,172 sf (0.30 ac)
Total Impervious Area: 6,347 sf (0.14 ac)
1st Flush Vol.: 529 cf (Required)
Total Available Storage: 2,208 cf (Total)
830 cf Amended Soils (133.5 cy = 1,030 sf @ 3.5' deep), 20% & 40% Voids (First Flush)
347 cf Ponding Below Pond Outlet (First Flush)
1,031 cf Ponding Above First Flush
Treated Storage: 1,177 cf
100 yr elev: 943.69 ; 25yr elev: 943.62

POND #3 - Bio-Retention
Drainage Subbasin: 3S+6S = 10,582 sf (0.24 ac)
Total Impervious Area: 5,673 sf (0.13 ac)
1st Flush Vol.: 473 cf (Required)
Total Available Storage: 735 cf (Total)
247 cf Amended Soils (53.3 cy = 411 sf @ 3.5' deep), 20% & 40% Voids (First Flush)
254 cf Ponding Below Pond Outlet (First Flush)
234 cf Ponding Above First Flush
Treated Storage: 501 cf
100 yr elev: 947.78 ; 25yr elev: 941.71

POND #4 - Bio-Retention
Drainage Subbasin: 4S = 6,007 sf (0.14 ac)
Total Impervious Area: 4,867 sf (0.11 ac)
1st Flush Vol.: 406 cf (Required)
Total Available Storage: 451 cf (Total)
419 cf Stone storage and tank, 40% & 100% Voids (First Flush)
7 cf Ponding Below Pond Outlet (First Flush)
25 cf Ponding Above First Flush
Treated Storage: 426 cf
100 yr elev.: 947.23 ; 25yr elev: 947.20



POND #5 - Bio-Retention
Drainage Subbasin: 5S = 15,807 sf (0.36 ac)
Total Impervious Area: 3,174 sf (0.07 ac)
1st Flush Vol.: 265 cf (Required)
Total Available Storage: 344 cf (Total)
254 cf Amended Soils and tank, 20% & 100% Voids (First Flush)
36 cf Ponding Below Pond Outlet (First Flush)
54 cf Ponding Above First Flush
Treated Storage: 290 cf
100 yr elev: 948.10 ; 25yr elev: 948.02

BY-PASS AREA
Drainage Subbasin: 75 = 21,846 sf (0.50 ac)
Total Impervious Area: 3,456 sf (0.08 ac)
1st Flush Vol.: 288 cf (Required)
Total Available Storage: 0 cf
(Part of front driveway by-passes the ponds and is not treated. Total site treatment volume and detention is achieved in total of all ponds.)

C. Detention Storage Estimate -

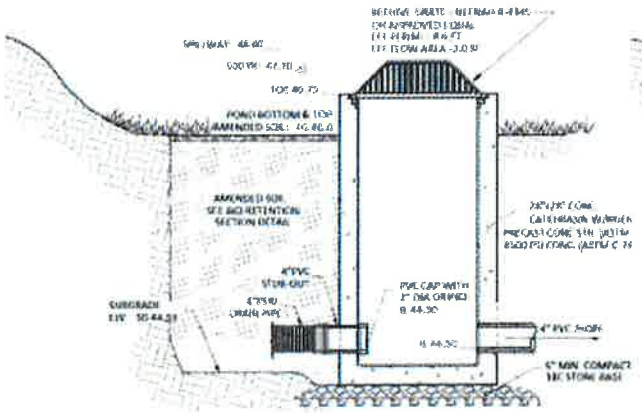
Estimated Storage Needed (25yr) = (Qpost – Qpre)*Tc*(60 sec/min) (Tc max = 7.7 min)

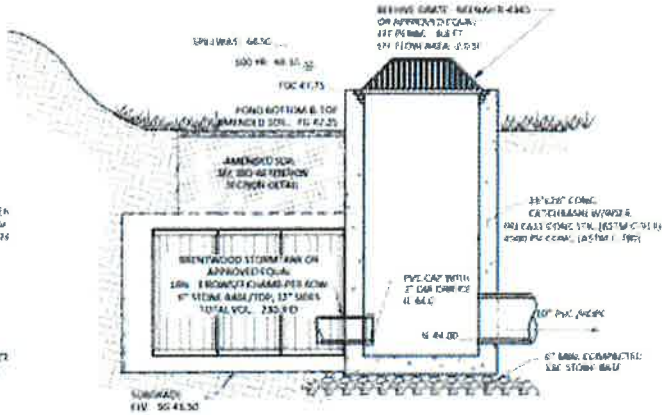
Storage Needed for Q25 = (11.3cfs - 10.26cfs)*7.7min*60sec/min = 480 cf < 2,079 cf first-flush volume, therefore **No Additional Storage Needed if Peak Flows are attenuated.**

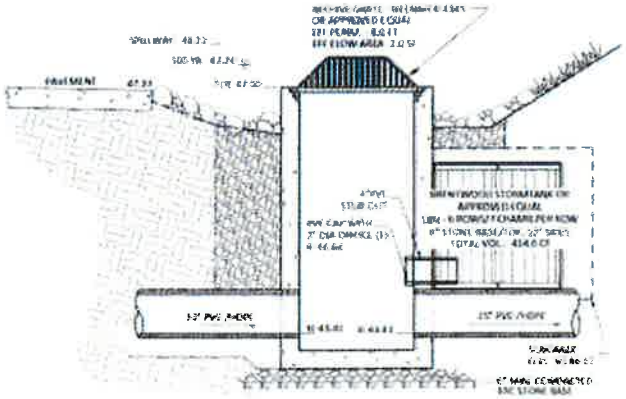
D. Pond and Control Structure Summary –

There are four bio-retention/stone filter ponds in a series which collect most of the site's runoff. An additional small pond near the southeast corner of the building collects roof runoff. All control structures for these ponds are comprised of concrete risers with a beehive inlet grate. The grate inlet elevation is set to pond the water-quality volume (first-flush), and the ponds infiltrate into existing soils and are also drawn down by a 4 inch perforated drawdown pipe. Exfiltration quantities were not taken into account with these calculations, so additional reduction in runoff can be expected.

The following drawings are typical of the pond outlet control structures. See the construction plans for more detail.







E. Outfall Summaries -

Post-development flows < Pre-development flows, therefore detention control and pond storage not needed.

Pre-Developed Site Peak Runoff:

Events for Subcatchment 10S: Entire Site

Event	Volume (cubic-feet)	Depth (inches)
1 yr	7,656	1.23
2 yr	10,519	1.68
5 yr	14,588	2.33
10 yr	17,884	2.86
25 yr	22,603	3.62
50 yr	26,425	4.23
100 yr	30,424	4.87

Post-Developed/Routed Site Peak Runoff:

Events for Reach 1R: Roadside Ditch OUTFALL

Event	Inflow (cfs)	Elevation (feet)
1 yr	2.90	936.83
2 yr	4.12	936.90
5 yr	5.57	936.97
10 yr	6.75	937.02
25 yr	8.87	937.09
50 yr	11.22	937.16
100 yr	12.17	937.19

III. Long-Term Maintenance Plan –

Activity	Schedule
Re-mulch void areas Treat diseased trees and shrubs Mow turf areas	As needed
Water plants daily for 2 weeks	At project completion
Inspect soil and repair eroded areas Remove litter and debris	Monthly
Remove and replace dead and diseased vegetation	Twice per year
Add mulch Replace tree stakes and wires	Once per year
Replace tree stakes and wires	As needed

(Source: ETA and Biohabitats, 1993)

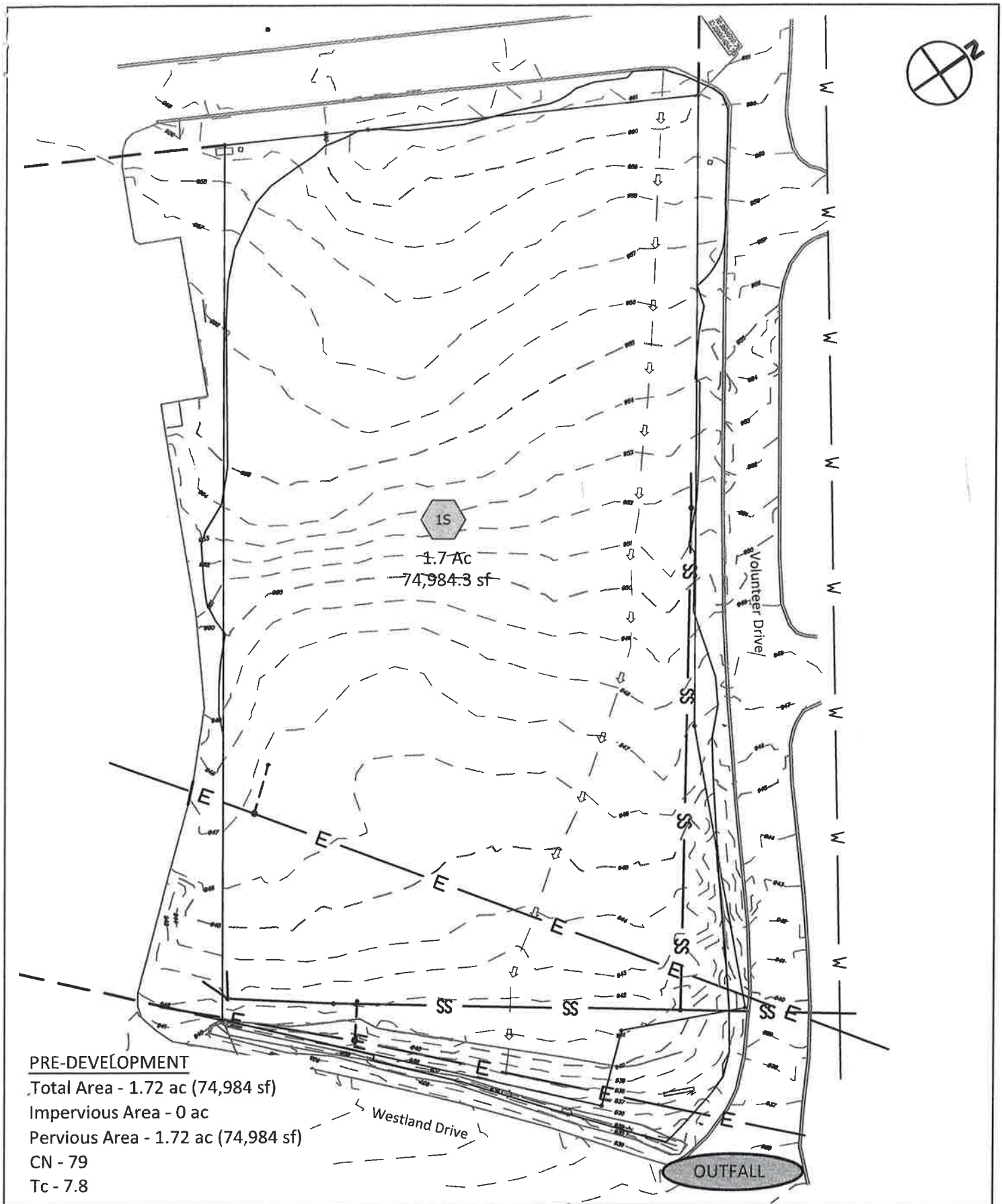
IV. Maps – Location; Pre- & Post-Developed Conditions; FEMA; Soils Map

Google Maps

LOCATION MAP

2190 Westland Dr., Cleveland, TN 37311

Imagery ©2017 DigitalGlobe, USDA Farm Service Agency, Map data ©2017 Google 500 ft



PRE-DEVELOPMENT
Total Area - 1.72 ac (74,984 sf)
Impervious Area - 0 ac
Pervious Area - 1.72 ac (74,984 sf)
CN - 79
Tc - 7.8

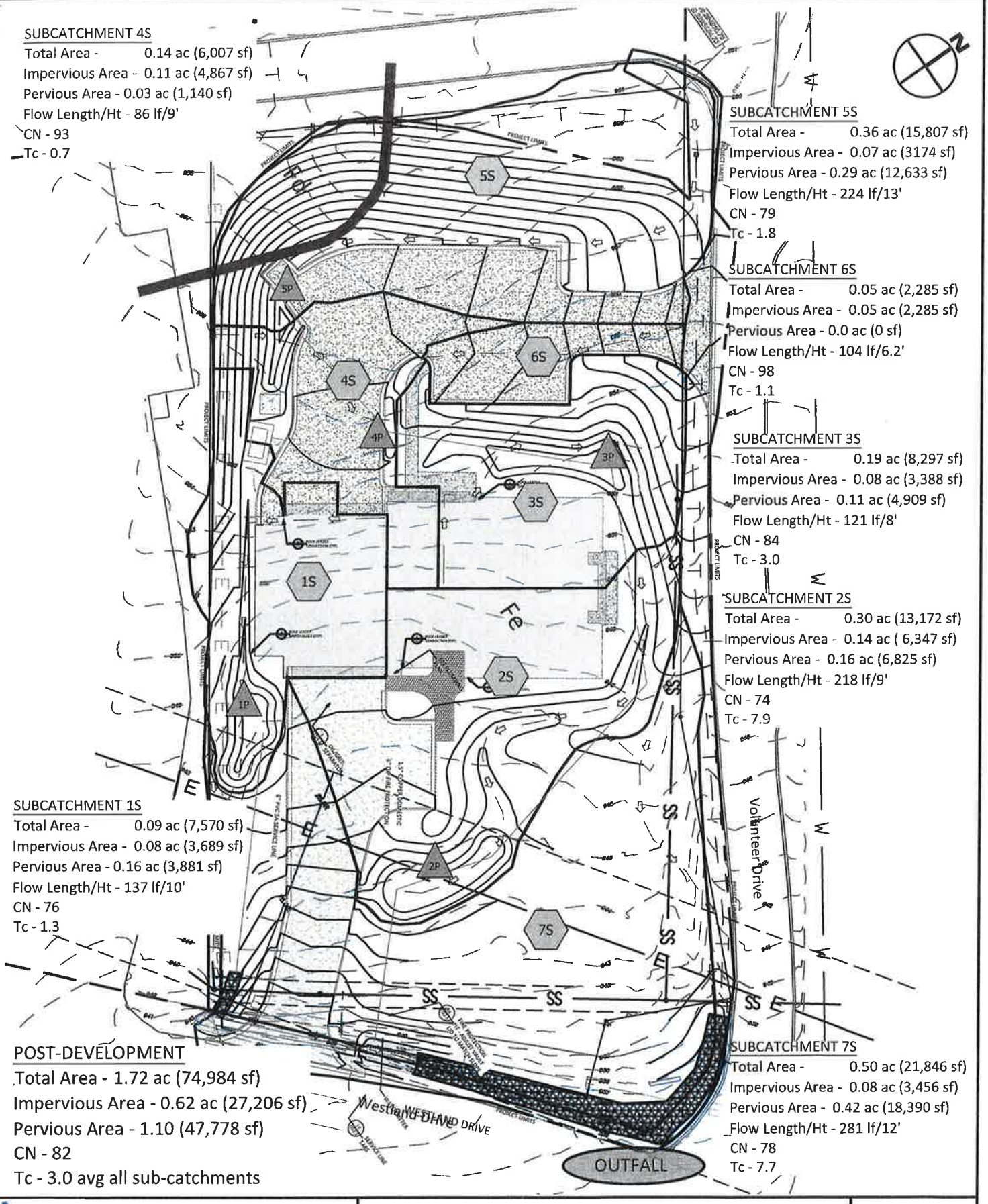
Passpointe Engineering, PLLC
2719 Hickory Valley Rd, Suite B
Chattanooga, Tennessee 37421

Fire Station #6 - Pre-Development Conditions

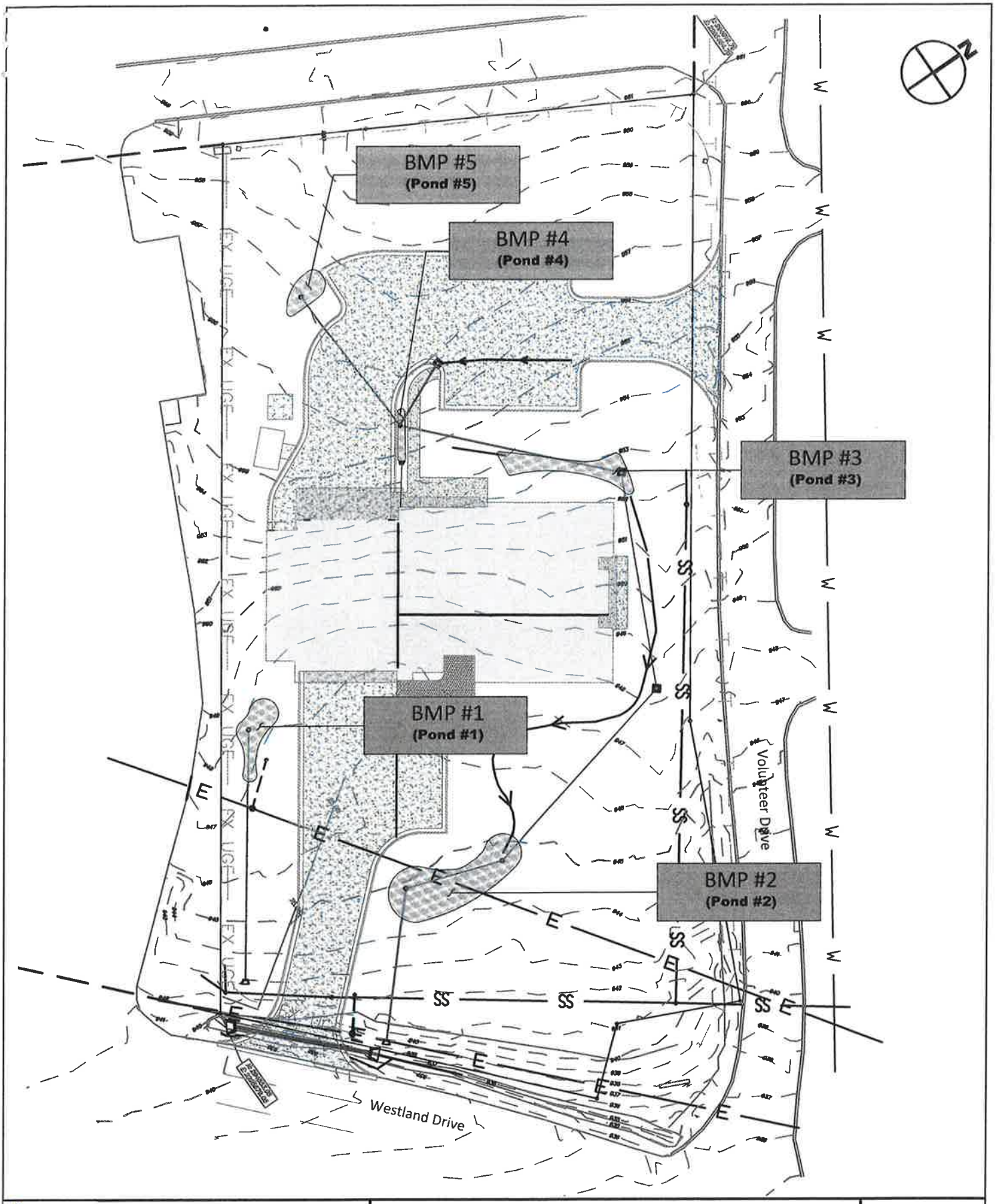
DATE: 01-18-17
SCALE: 1" = 50'

PRJ. NO. 16-053

SW0.1



Passpointe Engineering, PLLC 2719 Hickory Valley Rd, Suite B Chattanooga, Tennessee 37421	Fire Station #6 - Post-Development Conditions	SW0.2
	DATE: 01-18-17 SCALE: 1" = 50'	PRJ. NO. 16-053



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2719 Hickory Valley Rd, Suite B
Chattanooga, Tennessee 37421

Fire Station #6 - BMP Location Map

DATE: 01-18-17
SCALE: 1" = 50'

PRJ. NO. 16-053

SW0.3

APPENDIX G

Erosion Prevention and Sediment Control Plans and Details

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PERMITTEE SPECIAL NOTES:

The permittee shall post a notice near the main entrance of the construction site with the following information: (6 2 1)

A. A copy of the notice of coverage (NOC) with the NPDES Permit Number for the project.
B. The name or company name; email address; telephone number and address of site Owner/operator or a local contact person
C. A brief description of the project
D. The location of the EPSC Plan if the site is inactive or does not have an on site location to store the plan.

INSPECTIONS (3 5 8 2)

1. Inspections shall be performed at least twice every calendar week, and at least 72 hours apart, by Qualified Personnel. Qualified Personnel shall meet requirements of the Permit (3.5.8 1, 3 5 8 2 a & b)
2. Site Outfalls and erosion prevention and sediment control measures shall be checked twice weekly and repaired if necessary. In the event of continuous rainfall, control measures shall be checked daily (3 5.8 2 a)
3. EPSC measures shall be observed to ensure they are operating correctly. Inspection areas shall include:
   a. All disturbed areas and areas used for storage of materials that are exposed to precipitation
   b. Outfall points
   c. Vehicle entry and exit points
   d. Structural control measures, etc.
4. Based on results of inspection, any inadequate control measures or control measures in disrepair shall be replaced, modified or repaired as necessary before the next rain event, but in no case more than seven (7) days after the need is identified. (3.5.7, 3.5.8.2.e)
5. Based on results of inspection, the site description and pollution prevention measures in the SWPPP shall be revised as appropriate, but in no case later than seven (7) days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than fourteen (14) days following inspection. (3.5.8.2.f)
6. All inspections shall be documented on the standard Construction Stormwater Inspection Certification forms, or alternate/equivalent forms, by trained certified inspectors (3.5 8.2g & h)
7. Erosion control measures shall be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.

NPDES GENERAL PERMIT CRITERIA AND REQUIREMENTS: (3 5 3 1)

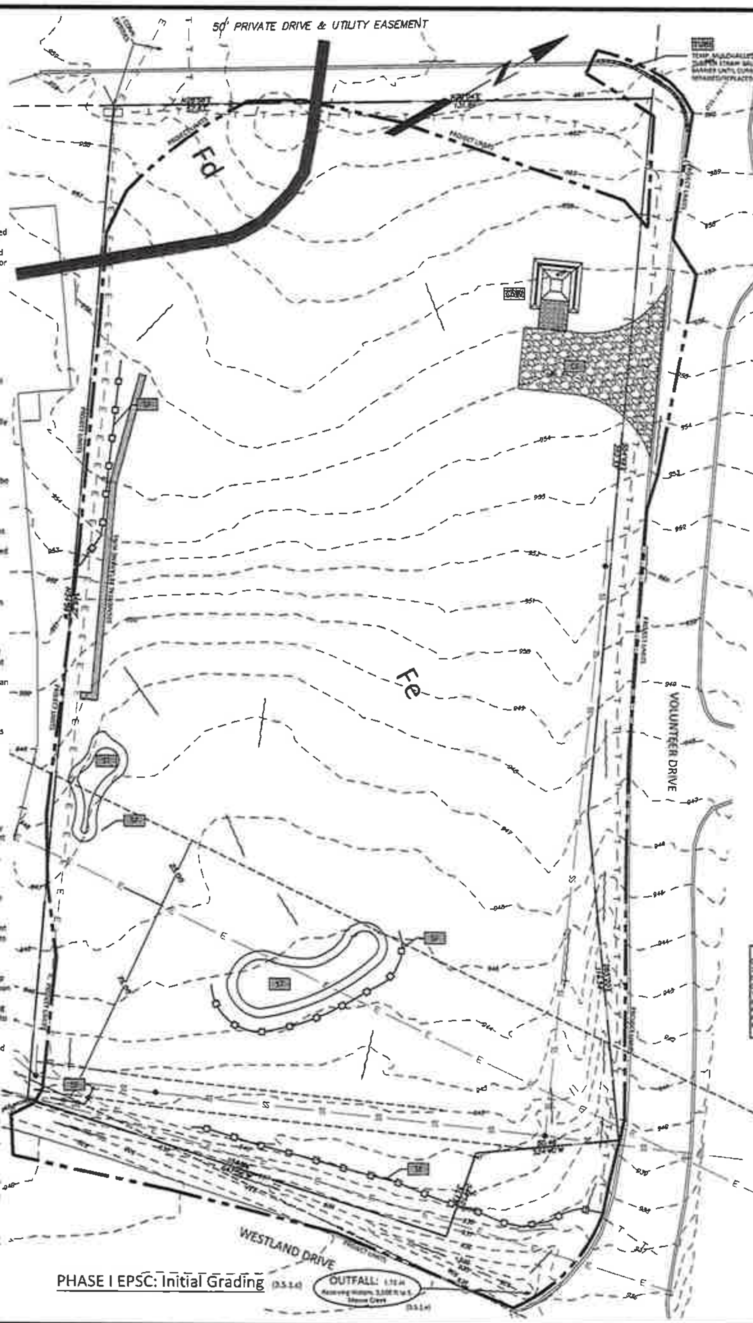
1. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications to eliminate (or minimize if complete elimination is not possible) the dislodging and suspension of soil in water. Sediment controls shall retain mobilized sediment on-site to the maximum extent practicable. (3.5.3.1.a)
2. Inspection and maintenance of Best Management Practices (BMPs) and erosion controls shall be consistent with current edition of the Tenn. Erosion and Sediment Control Handbook. BMPs must be installed and maintained in accordance with manufacturer's specifications. All control measures must be able to slow runoff so that rill and gully formation is prevented. Steep slopes or soil types may indicate additional runoff treatment may be required. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the permitee must replace or modify the control for site situations. (3.5.3.1.b)
3. The planting of permanent or temporary vegetation is not to be used as a control measure. Planting cover vegetation during winter months or dry months should be avoided. (3.5.3.1.c)
4. If sediment escapes the construction site, off-site accumulations of sediment that have not reached a stream must be removed at a frequency sufficient to minimize offsite impacts (eg., fugitive sediment that has escaped the construction site and has collected in the street must be removed so that it is not subsequently washed into storm sewer and streams by the next rain and/or so that it does not pose a safety hazard to users of public streets). This permit does not authorize access to private property. (3.5.3.1.d)
5. Sediment should be removed from sediment traps, silt fences, sedimentation ponds, and other sediment controls as necessary, and must be removed when design capacity has been reduced by 50%. (3.5.3.1.e)
6. Litter, construction debris, and construction chemicals exposed to storm water shall be picked up prior to anticipated storm events (eg., forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for storm water discharges (eg., screening, outfalls, daily pickup, etc.). After stabilization, silt fences should be removed or otherwise prevented from becoming a pollutant source for storm water discharges. (3.5.3.1.f)
7. Erodible material storage areas for the site and contiguous to the site are considered part of the site. (3.5.3.1.g)
8. Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 14 calendar days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed. (3.5.3.1.h)
9. Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. (3.5.3.1.i)
10. Construction must be sequenced to minimize the exposure time of graded or denuded areas. (3.5.3.1.j)
11. Erosion and sediment control measures must be in place and functional before earth moving operations begin, and must be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the work day, but must be replaced at the end of the work day, on site. (3.5.3.1.l)
12. Any disturbed area left exposed where construction has temporarily or permanently ceased for a period greater than 14 days shall be stabilized with mulch or temporary seeding. (3.5.3.2)
13. The following records shall be maintained on or near the site: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; the dates when stabilization measures are initiated; inspection records and rainfall records. (3.5.3.1.m)
14. Off-site vehicle tracking of sediment and the generation of dust shall be minimized. A stabilized construction access shall be described and implemented, as needed, to reduce the tracking of mud and dirt onto public roads by construction vehicles. (3.5.3.1.n)
14. Permittees shall maintain a rain gauge and daily rainfall records at the site, or use a reference site for a record of daily amount of precipitation. (3.5.3.1.o)

ADDITIONAL EROSION PREVENTION & SEDIMENT CONTROL NOTES:

1. Contractor shall be responsible during construction for the continuous maintenance of sediment & erosion control measures as called for on the drawings & per the TN Erosion & Sediment Control Handbook. Contractor shall comply with all local erosion, conservation & siltation ordinances. The Contractor shall comply with all state & local sediment control & air pollution ordinances or rules.
2. Sediment & erosion control facilities & storm drainage facilities shall be constructed prior to any other construction.
3. Sediment & erosion control measures shall not be removed until all construction is complete & until a permanent ground cover has been established.
4. All graded areas shall be stabilized with a temporary fast growing cover and/or mulch, no later than 2 weeks after earth disturbing activity ends, and in those areas where grading activity has ceased & fine grading will not take place for at least 14 days.
5. Existing drainage structures are to be inspected repaired as needed & cleaned out to remove all silt & debris.
6. If any fines or penalties are levied against the property or property owner because of lack of erosion and/or sediment control, the contractor shall be responsible for payment of such fines or penalties or the cost of any fines or penalties shall be deducted from the contract amount.
7. Construction exit shall be maintained on a continuous basis.
8. The contractor shall use whatever measures are required to prevent silt & construction debris from flowing onto adjacent properties. This can be accomplished by small temporary sediment points, silt fences of steel wire & burlap or barriers of cedar trees and/or bales of straw. Contractor shall remove all temporary erosion control structures upon completion of permanent drainage facilities & the establishment of a stand of grass sufficient to prevent erosion.
9. Contractor shall take all available precautions to control dust. Contractor shall control dust by sprinkling, by applying calcium chloride, or by other methods as directed by engineer and/or owner's representative, at no additional cost to the owner.
10. All side ditches to be cleaned and/or re-graded to provide proper drainage.
11. All areas not otherwise surfaced are to be seeded, landscaped, mulched, watered & maintained until adequate stand of grass obtained.
12. Seeding & fertilizing rates for temporary & permanent stands of grass shall be per these plans and specs.

PRODUCT SPECIFIC PRACTICES (3 5 5)

1. Petroleum Based Products - All fueling of equipment and vehicles on site will be conducted near the northwest end of the proposed structure, or at another single designated location selected by the Contractor. Any spillage shall be contained and removed immediately through the use of filter socks or other approved means. Contaminated soils will be placed on heavy plastic and covered or placed into approved containers to prevent contact with storm water. Oils, other vehicle fluids, paints, and solvents will be stored in the construction trailer or other temporary storage structure. Any spill in excess of two gallons will be reported to the project Superintendent and the Engineer.
2. Containers for products such as fuels, lubricants, and tars will be inspected daily for leaks and spills. This includes on-site vehicle and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas will be located away from State water, natural drains, and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oils and lubricants is prohibited. Proper disposal methods will include collection in a suitable container and disposal as required by local and State regulations.
3. Paints/Finishes/Solvents - All products will be stored in tightly sealed original containers when not in use. Excess product will not be discharged to the storm water collection system. Excess product, materials used with these products and product containers will be disposed of according to manufacturer's specifications and recommendations.
4. Concrete Truck Washing - NO concrete trucks will be allowed to wash out or discharge surplus concrete or drum water onsite.
5. Fertilizers/Herbicides - These products will be applied at rates that do not exceed the manufacturer's specifications or above the guidelines set forth in the crop establishment or in the Tennessee Erosion and Sediment Control Handbook. Any storage of these materials will be under roof in sealed containers.
6. Building Materials - No building or construction materials will be buried or disposed of on-site. All such material will be disposed of by proper waste disposal procedures.



PHASE I EPSC: Initial Grading (3.5.1.c)

STABILIZATION PRACTICES (3 5 3 2)

1. Temporary stabilization shall include topsoil and temporary seeding until construction activities and weather permit permanent seeding.
2. Any area where construction has temporarily or permanently ceased shall be stabilized within 14 days.
3. Permanent stabilization includes permanent seeding, installation of channel turf reinforcing mat, bio-retention soils and mulch, and landscape plantings.
4. Steep slopes (>35°, 1.8:1) shall be stabilized no later than seven days (7) after construction activity on slope has temporarily or permanently ceased.

STRUCTURAL PRACTICES (3.5 3 3)

1. Structural practices are prepared per Tenn. Erosion and Sediment Control Handbook and to minimize effects of applicable 2 yr and 5 yr design storm depths
2. Runoff and discharge of pollutants from exposed areas is limited, reduced, or diverted by the use of the following:
   - temporary tube berm - diverts water from street with broken curb
   - silt fencing - slow flows and entrap sediments
   - stone construction exit - collects sediment from vehicle tires
   - temporary pond depressions - collects and slows down site runoff, allowing sediment to fall out
   - rock outlet protection and TRM - protects and repairs existing channel from erosion

STORMWATER MANAGEMENT (3 5.4)

1. Stormwater management measures controlling pollutants in stormwater discharges after construction include bio-retention/filter areas, flat graded swales, and surface protected channels.
2. The post-developed peak flows and velocities at the Outfall are reduced to less than pre developed flows and velocities (See Hydrology Report). Therefore, no dissipation measures are added
   - Q25pre = 10 26 cfs   V25pre = 2 05 fps
   - Q25post = 8.85 cfs   V25post = 1.52 fps
3. Regular weekly/monthly review of site conditions shall be performed by Permitee to ensure that vegetation, erosion prevention, and sediment control measures, etc. are kept in good and effective operating condition. Maintenance needs identified in inspections of by other means shall be accomplished before the next storm event, but in no case more than seven (7) days after the need is identified (3 5 7, 3 5 8 2)

STORMWATER RUNOFF CONTROLS (3 5 2)

Site Disturb. Activity	Control Measure/Timing	Responsible Party
• topsoil removal	silt fence, constr. exit/prior to work	Contractor
• mass excavation	silt fence, pond depressions/prior perm. seeding/immed. after slopes	Contractor Sub-Contractor
• retaining wall install	silt fence, pond depressions/prior	Contractor
• storm pipe install	silt fence, ponds, inlet & outlet protection/prior to work & post install	Contractor
• curbs/driveway constr.	gravel surfacing/prior	Contractor
• pond construction	silt fence	Contractor

Sediment shall be removed from sediment controls at a minimum of when design capacity has been reduced by 50% (3 5 3 1 c)

SITE ASSESSMENT (3 1 2)

☐ Outfall drains ≥ 5 ac and receiving waters are Exceptional or unavailable parameters
☐ Outfall drains ≥ 10 ac
X Outfall drains < 10 or < 5 ac with Exceptional waters or unavailable parameters, therefore, no site assessment is required

Site assessment shall be performed within 30 days of construction commencement, starting at each outfall and covering the entire disturbed area. It shall be performed by either: a) licensed engineer or landscape architect, b) a CPESC individual, or c) a TDEC Level II certified individual

SPILL CLEANUP AND CONTROL PRACTICES (3 5 5)

1. Local, State, and manufacturer's recommended methods for spill cleanup will be clearly posted and procedures will be made available to site personnel.
2. Material and equipment necessary for spill cleanup will be kept in the material storage areas. Typical materials and equipment includes, but is not limited to, brooms, dustpans, mops, rags, gloves, goggles, cat litter, sand, sawdust, and properly labeled plastic and metal waste containers.
3. Spill prevention practices and procedures will be reviewed after a spill and adjusted as necessary to prevent future spills.
4. All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, State, and Federal regulations.
5. FOR SPILLS THAT IMPACT SURFACE WATER (leave a sheen on the surface water), THE NATIONAL RESPONSE CENTER (NRC) SHALL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675
6. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL SHALL BE CLEANED UP AND LOCAL AGENCIES SHALL BE CONTACTED AS REQUIRED.
7. The Contractor shall notify the design professional of record if more than 1,320 gallons of petroleum is stored on-site (this includes capacities of equipment), or if any one piece of equipment has a capacity greater than 660 gallons. The Contractor will need a Spill Prevention Containment and Counter-measures Plan prepared by a licensed professional

NATURE OF CONSTRUCTION ACTIVITY

[illegible]

TOTAL ACRES: 1.72 ±
DISTURBED ACRES: 1.70 ±
RECEIVING WATERS: South Mouse Creek (habitat and siltation impaired, non-supporting) (3 5 1 k)

AQUATIC RESOURCES (3 5 1 i, j)

There are no aquatic resources within the proposed project disturbed area.

SEDIMENT BASINS/OTHER SEDIMENT CONTROLS (3.1.1)

N/A - The site is not draining into an outfall totaling 10 ac or more, or 5 ac or more if draining to waters with unavailable parameters (impaired) or Exceptional TN waters.

RUNOFF CHANGES (3 5 1 g)

Post Dev Runoff Coeff: 82
Pre-Dev. Imperv: 0 ac
Post-Dev. Imperv: 0 55 ac (32%)

Post developed runoff will be managed by a series of filtering, storage, and bio-retention areas. These practices will clean the runoff, decrease the peak flow, provide some infiltration as the soil types allow, and will irrigate landscape plantings.


VICINITY MAP - NTS

SITE & CONTACT NOTES

1. Site Address: 2190 Westland Dr. Cleveland, TN 37311
2. Owner: City of Cleveland
   Contact: Jonathan Jobe
   Phone: (423) 559 3330, (423) 593 0432 (mob.)
3. Nearest Cross-street: 174 Refreshment Ln SW, Cleveland, TN 37311
4. Parcel Number: 057 018 21
5. Zoning: R-2
6. Parcel Area: 1.82 acres (3.5.1.e)
   Area Disturbed: 1.72 acres
   Pre-Constr. Impervious: 0 acres
   Post-Constr. Impervious: 0.62 ac (36%)
7. Flood Elevation (100yr): Property does not appear to lie in the 100 yr. flood zone as per FIRM Map No. 47011C0119E, dated February 2 2007.
8. TOPO SURVEY: Topographic Survey provided by Medders Surveying on 12/12/16 (Proj No. 16-243). The Contractor is responsible for verifying control/benchmarks shown on Topographic Survey before construction begins.
9. EROSION CONTROL: Owner's representative: Jonathan Jobe Phone: 423-559-3330
10. Citations in parenthesis indicate Sections of the current NPDES Construction General Permit.

EROSION CONTROL LEGEND

Symbol	Description
— - - —	PROJECT LIMITS
CE	CONSTRUCTION EXIT
CWA	CONCRETE WASH-OUT AREA
IP	INLET PROTECTION
OP	OUTLET PROTECTION
PS	PERMANENT SEEDING
TS	TEMPORARY SEEDING
TO	TOP SOIL
SR	SURFACE ROUGHENING
SF	SILT FENCE
ST	TEMPORARY SEDIMENT TRAP
TUBE	TUBES OR WADDLES

PHASE I EPSC: Initial Grading (3.5.1.c)

INITIAL PHASE EPSC SCHEDULE (3.5.2)

1. CONDUCT PRE CONSTRUCTION MEETING WITH EROSION CONTROL INSPECTOR
2. STAKE OUT CLEARING LIMITS, ETC
3. FIRST CONSTRUCTION ITEM: INSTALL CONSTRUCTION EXITS AND PERIMETER SILT FENCES. THESE MUST BE INSTALLED BEFORE EARTH MOVING BEGINS (3 5 3 1)
4. CLEAR AREAS NEEDED FOR INSTALLATION OF SEDIMENT TRAPS
5. INSTALL SEDIMENT TRAPS ALONG WITH DOWNSIDE SILT FENCE.
6. CONSTRUCT PROPOSED RETAINING WALL AND STABILIZE AREA BEHIND WALL.
7. PERFORM STRIPPING OF TOP SOIL.
8. PROVIDE TEMPORARY GRASSING / MULCHING @ 14 DAY INTERVALS.

WEEK	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
EROSION CONTROL (PERMANENT)																																				
STRIPPING / CLEARING																																				
EARTHWORK																																				
DRAINAGE / INTERNAL EROSION CONTROL STRUCTURES																																				
TEMP VEGETATION / PERM STAB																																				
BUILDING CONSTRUCTION																																				
PAVING																																				
PERMANENT VEGETATION																																				
REMOVE TEMP EROSION CONTROL STRUCTURES																																				

Soils Information Available per NRCS: (3.5 1 f)
Fd - Fullerton gravelly silt loam, 12 to 25% slopes, eroded, HSG B
Fe - Fullerton gravelly silt loam, 5 to 12% slopes, eroded, HSG B

ENGINEER'S CERTIFICATION STATEMENTS FOR SITES DISCHARGING INTO IMPAIRED OR EXCEPTIONAL TN WATERS (3.1.1)

1. The erosion prevention and sediment controls used at the site have been designed to control storm runoff generated by a 5 year, 24 hour storm event.
2. The SWPPP has been prepared by a TDEC Level II designer/engineer: Jan C Pass PE

811 Know what's below. Call before you dig

1" = 20'
0 20 40' 60'

passpointe
2719 Hickory Valley Road, Suite B
Chattanooga, TN 37421
423 451 6601
janpass@passpointe.com

river street architecture, llc
architecture planning interiors
714 cherry street, chattanooga, tennessee 37402
p. 423 634 0806 f. 423 752 8499 www.riverstreetarchitecture.com

CITY OF CLEVELAND
FIRE HALL #6
2190 WESTLAND DRIVE, CLEVELAND, TENNESSEE 37311

RELEASE DATE: 03-10-17
PROJECT NO: 16077
DRAWN BY: AOT
CHECKED BY: JDM

EROSION PREVENTION & SEDIMENT CONTROL PHASE I

C1.1

RECORDS AVAILABILITY AND RETENTION

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part 8 of the Permit. (6.1)

   a. A copy of Notice of Intent submitted, and of Notice of Coverage received from TDEC;
   b. Copies of Storm Water Pollution Prevention Plans and Erosion Prevention and Sediment Control Plans;
   c. A copy of the NPDES Permit TNR 100000.
   d. A copy of the qualified inspector's certification, or training record for inspector certification. (3.5.8.1)
   e. Records of dates when major grading activities occur; dates when construction activities temporarily or permanently cease on a portion of the site; dates when stabilization measures are initiated; inspection records and rainfall records. (3.5.1.l.m)

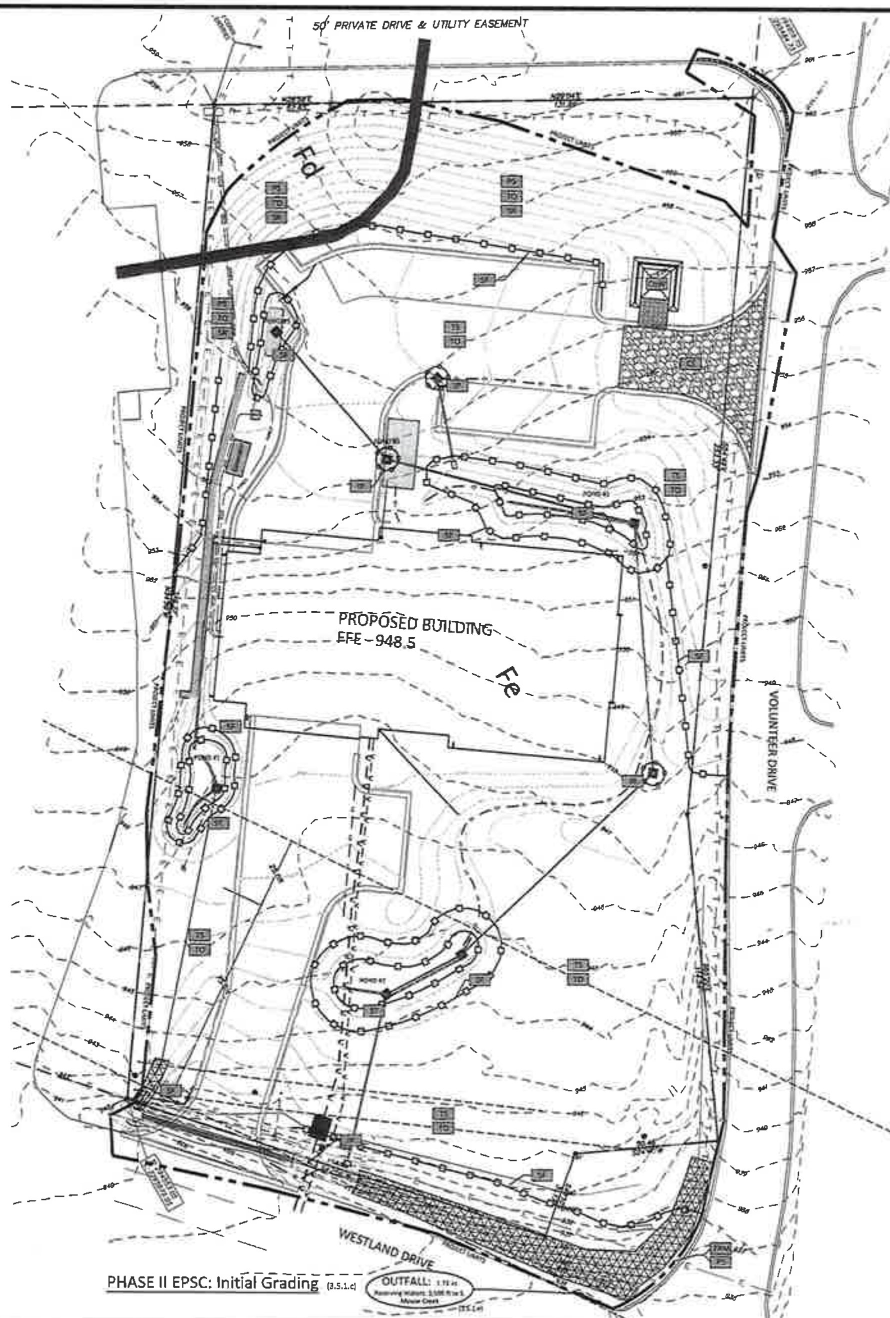
   Permittees with day-to-day operational control over SWPPP implementation shall have a copy of the SWPPP available at a central location onsite for the use of all operators and those responsible under the plan whenever they are on the construction site.

2. The permittee shall make updated plans and inspection reports available upon request to the director; the local agency approving erosion prevention and sediment control plans, grading plans, land disturbance plans or stormwater management plans; or the operator of an MS4. (3.3.2)

3. A copy of the current version of the SWPPP shall be retained on-site at the location which generates the stormwater discharge in accordance with Part 6 of the Permit. If the site is inactive or does not have an onsite location adequate to store the SWPPP, the location of the SWPPP, along with a contact phone number, shall be posted on-site. If the SWPPP is located offsite, reasonable local access to the plan, during normal working hours, must be provided. (3.3.3)

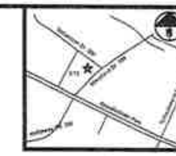
4. SWPPP modifications and updates must be made under any of the following conditions: (3.4.1)
   a. Change in scope with significant effect not previously addressed;
   b. Whenever inspections to investigations indicate ineffective measures or non achievement of general objectives
   c. Whenever necessary to prevent a negative impact to legally protected state or federally listed fauna or flora, etc.
   d. Whenever a TMDL is developed for the receiving waters for a pollutant of concern

5. The permittee shall retain copies of SWPPPs, reports required by this Permit, records of all data used to complete the NOI and the NOT for a period of at least three years from the date the NOT was submitted. This period may be extended by written request of the director. (6.2)



PHASE II EPSC: Initial Grading (3.5.1.c)

OUTFALL: 1.72 ac



VICINITY MAP - NTS

SITE & CONTACT NOTES

1. Site Address: 2190 Westland Dr. Cleveland, TN 37311
2. Owner: City of Cleveland
   Contact: Jonathan Jobe
   Phone: (423)-559-3330, (423)-593-0432 (mob.)
3. Nearest Cross street: 174 Refreshment Ln SW, Cleveland, TN 37311
4. Parcel Number: 057 018 21
5. Zoning: R-2
6. Parcel Area: 1.62 acres
   Area Disturbed: 1.72 acres
   Pre-Constr. Impervious: 0 acres
   Post-Constr. Impervious: 0.62 ac (36%)
7. Flood Elevation (100yr): Property does not appear to lie in the 100 yr. flood zone as per FIRM Map No. 4701 LC0119E, dated February 2, 2007.
8. TOPO SURVEY: Topographic Survey provided by Medders Surveying on 12/12/16 (Proj No 16-243). The Contractor is responsible for verifying control/benchmarks shown on Topographic Survey before construction begins
9. EROSION CONTROL:
   Owner's representative: Jonathan Jobe
   Phone: 423-559-3330
10. Citations in parenthesis indicate Sections of the current NPDES Construction General Permit.

EROSION CONTROL LEGEND

— — —	PROJECT LIMITS
CE	CONSTRUCTION EXIT
CWA	CONCRETE WASH-OUT AREA
IP	INLET PROTECTION
OP	OUTLET PROTECTION
PS	PERMANENT SEEDING
TS	TEMPORARY SEEDING
TO	TOP SOIL
SR	SURFACE ROUGHENING
SF	SILT FENCE
ST	TEMPORARY SEDIMENT TRAP
TUBE	TUBES OR WADDLES

TEMPORARY SEEDING

Temporary Seeding for Late Winter & Early Spring	Temporary Seeding for Summer	Temporary Seeding for Fall
Species: Rye — Rate (lb/acre): 120	Species: Oats 60; Brown-top millet 30 — Rate (lb/acre)	Species: Oats [illegible]; Winter wheat [illegible] — Rate (lb/acre)
Seeding dates: Feb. 1 - May 1	Seeding dates: May 15 - Aug. 15	Seeding dates: Aug 15 - Dec 15
Soil amendments: Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	Soil amendments: Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.	Soil amendments: Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.
Mulch: Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.	Mulch: Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.	Mulch: Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.
Maintenance: Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.	Maintenance: Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.	Maintenance: Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage. [illegible]

TS **TEMPORARY SEEDING**
NTS

PS SEE LANDSCAPE PLANS FOR PERMANENT SEEDING SPECIES AND AREAS.

PHASE II EPSC: Intermediate (3.5.1.c)

INTERMEDIATE PHASE EPSC SCHEDULE (3.5.2)

1. BEGIN SITE MASS GRADING.
2. STABILIZE FINISHED SLOPES WITH PERMANENT SEEDING
3. INSTALL UTILITIES (STORM, SANITARY, ELECTRIC, AND WATER) AND INSTALL APPROPRIATE TEMPORARY INLET/OUTLET PROTECTION.
4. SHAPE ROADSIDE SWALE ALONG WESTLAND DR. AND STABILIZE.
5. INSTALL DETENTION PONDS AND FILTRATION SYSTEMS
6. CONVERT TEMPORARY SEDIMENT TRAPS TO DETENTION PONDS/FILTRATION SYSTEMS
7. INSTALL SEDIMENT BARRIERS AROUND COMPLETED PONDS
8. PERFORM BUILDING CONSTRUCTION.
9. MAINTAIN TEMPORARY GRASSING AND PERM GRASSING @14 DAY INTERVALS, SILT FENCE, AND CONSTRUCTION ENTRANCE PER THIS PLAN AS THE GRADING PROGRESSES.

ENGINEER'S CERTIFICATION STATEMENTS FOR SITES DISCHARGING INTO IMPAIRED OR EXCEPTIONAL TN WATERS:

1. The erosion prevention and sediment controls used at the site have been designed to control storm runoff generated by a 5-year, 24 hour storm event.
2. The SWPPP has been prepared by a TDEC Level II designer/engineer: Jan C. Pass, PE

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1" = 20'
0 20' 40' 60'

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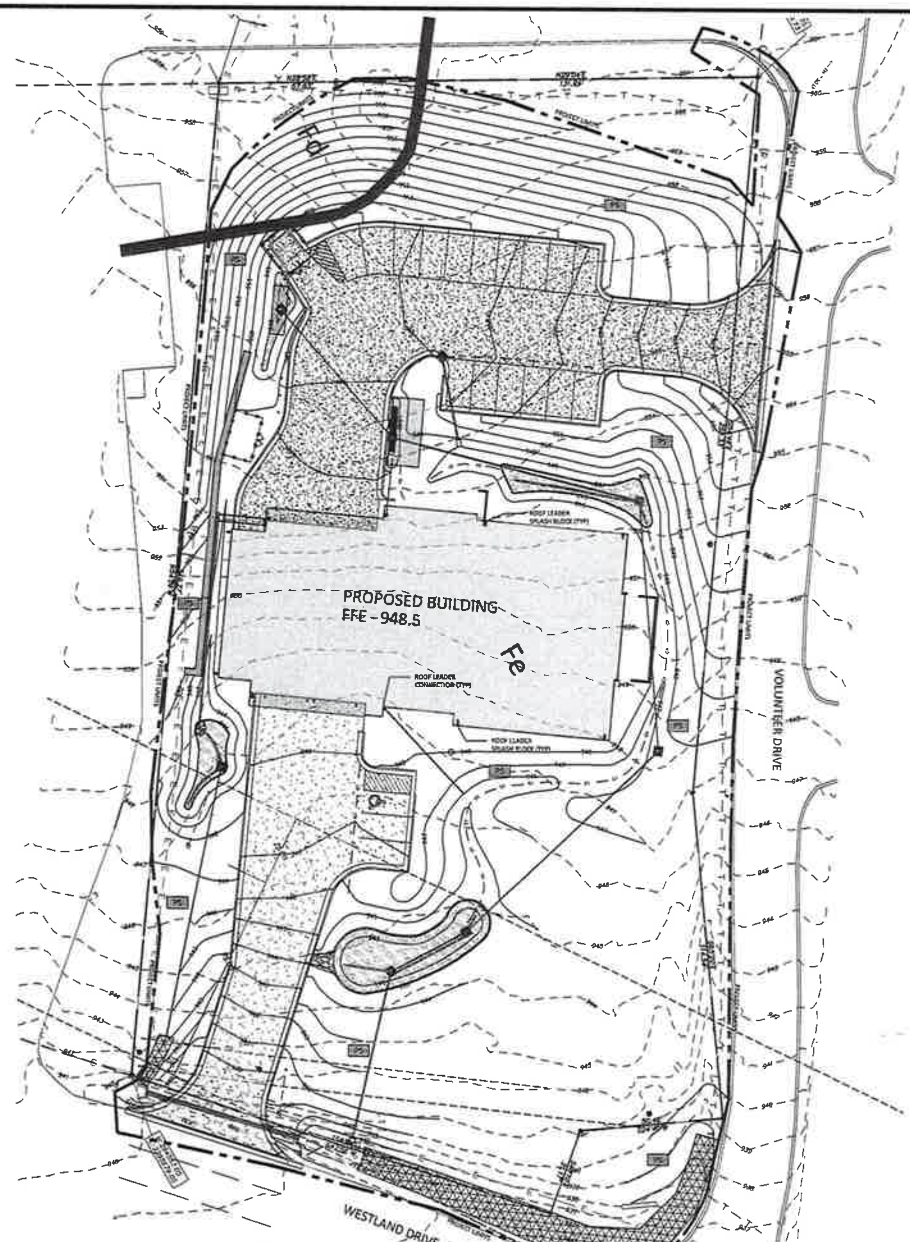
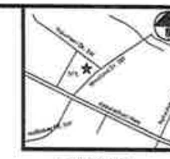
EROSION PREVENTION & SEDIMENT CONTROL PHASE II

C1.2



PHASE III EPSC: Initial Grading (3.5.1.c)



EROSION CONTROL LEGEND

— — —	PROJECT LIMITS
CE	CONSTRUCTION EXIT
CAW	CONCRETE WASH-OUT AREA
IP	INLET PROTECTION
OP	OUTLET PROTECTION
PS	PERMANENT SEEDING
TS	TEMPORARY SEEDING
TO	TOP SOIL
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TUB	TUBES OR WADDLES

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9. EROSION CONTROL:
   Owner's representative: Jonathan Jobe
   Phone: 423-559 3330
10. Citations in parenthesis indicate Sections of the current NPDES Construction General Permit.

PHASE III EPSC: Final (Runoff Management) (3.5.1.c)

FINAL PHASE EPSC SCHEDULE (3.5.2)

1. INSTALL CURBING, PAVING.
2. ONCE STORM DRAIN TOPS INSTALLED, INSTALL INLET PROTECTION AT EACH STRUCTURE (FINAL PHASE BMPs).
3. MAINTAIN TEMPORARY GRASSING @14 DAYS INTERVALS, INSTALL PERMANENT GRASSING @ 30 DAY INTERVALS.
4. LANDSCAPING WILL BE PERFORMED AS SOON AS PRACTICABLE. APPROPRIATE PLANT MATERIAL INSTALLED AREA BY AREA AS SITE WORK PERMITS.
5. CLEAN STORM STRUCTURES. INSTALL WATER QUALITY DEVICES ON DETENTION PONDS AND ANY OTHER PERMANENT BMPS.
6. DEMUCK ALL STRUCTURAL BMP'S AND SAFELY DISPOSE OF MATERIAL.
7. REMOVE SILT FENCING AND OTHER TEMPORARY SEDIMENT/EROSION CONTROL BMP'S ONCE GROUND COVER IS ESTABLISHED.

PS — SEE LANDSCAPE PLANS FOR PERMANENT SEEDING SPECIES AND AREAS

ENGINEER'S CERTIFICATION STATEMENTS FOR SITES DISCHARGING INTO IMPAIRED OR EXCEPTIONAL TN WATERS:

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2. The SWPPP has been prepared by a TDEC Level II designer/engineer: Jan C. Pass, PE

1" = 20 — 0, 20', 40', 60'

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EROSION PREVENTION & SEDIMENT CONTROL PHASE III

C1.3